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News in Brief

Official advices from Tasmania are to the effect that the reworking of fruit trees will be carried on as extensively this season as last. Growers are urged, when purning, to save good scion wood, and to heel it in in a cool, moist place.

That there are too many varieties of Apples produced for marketing in Australia was strongly emphasised at the recent Interstate Conference in Sydney.

The grading regulations are now being much more strictly enforced in Sydney.

The urgent necessity for an advertising campaign to increase the consumption of Apples appears to be now better appreciated among growers.

At the recent Insterstate Conference at Sydney, Col. Herrod, Secretary of the Fruitgrowers' Federation of N.S.W., in a capable address, demonstrated the necessity for creating a "fruit conscience" amongst the general public.

Up to June 30, 1936, the sum of £1,281 was made available to the Tasmanian State Fruit Board by means of the Acreage Tax.

Indications in Victoria point to a heavy crop of Apples in the coming season. When Australia has a full crop of Apples, growers will be wishing the campaign to increase Apple consumption had been commenced earlier.

Americans eat 62 lbs. of Apples per head of population per annum. In Australia the consumption is 32 lb. per head.

Western Australia has achieved the distinction of having exported over a milion cases of fruit this season.

An enquiry into the fruit industry is to be conducted in New Zealand.

The annual conference of the Australian Apple and Pear Export Council will be held at Adelaide in the week commencing October 26.

During the preceding week there will be an Interstate Conference of growers, convened by the South Australian Fruitgrowers' and Market Gardeners' Association.

Over 500 pupils are attending fruit packing instruction under the auspices of the Tasmanian Department of Agriculture. Instruction is limited to the packing into the standard "Canadian" case.

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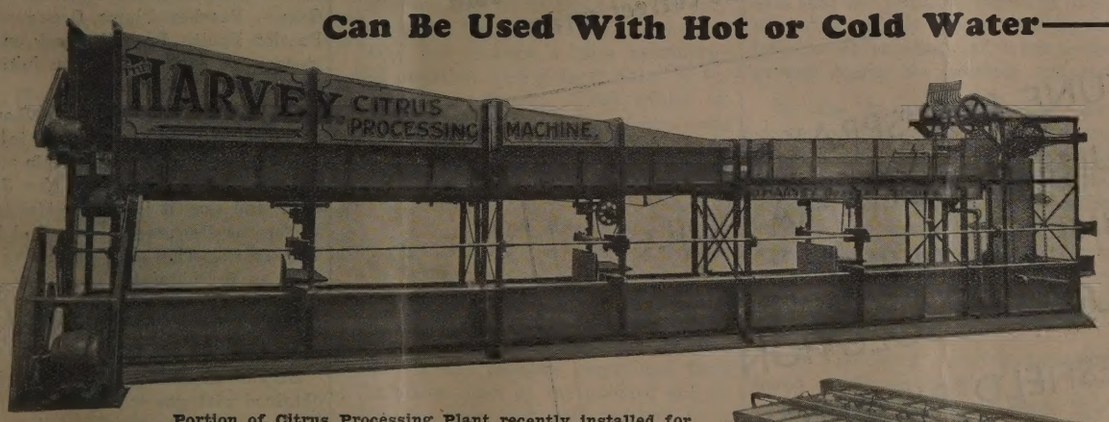

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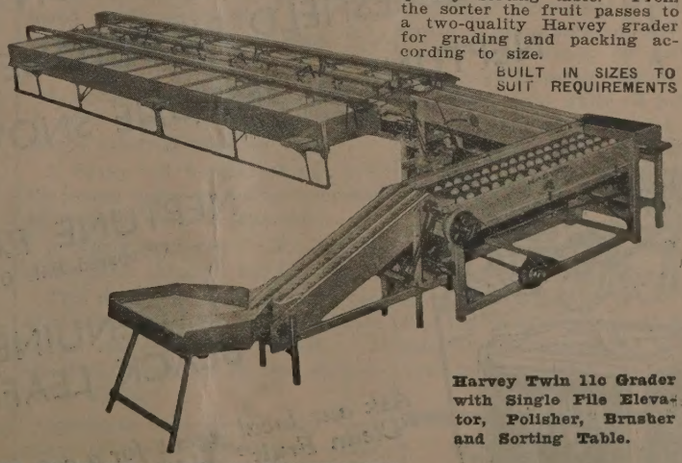

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CONTENTS

Illustrations.

Soil Fertility in the Orchard 8, 9, 10
Cabbage Moth Control 11
W.B.C. Pear Trees at Ardmona 29
Delegates to Cool Stores Conference 32
Mr. H. Louey Pang 38

Subjects.

Apple and Pear Grading Regulations 13-15
Apple Leaf Hoppers 5
Apple Trees, Nutrition for .. 40
Berry Fruit Culture 39, 40
Black Spot Control 6
Canned Fruits Section 19
Citrus News and Notes 23, 24, 26
Codlin Moth Pest 7
Does it Pay? 18
Dried Fruits Section 16. 17
Export and Commercial News 34-38
Firms in the Fruit Trade .. 38
Frost Protection Methods .. 16
Fruit Crops in U.S.A. 12
Fruitgrowing in the Goulburn Valley 29, 30
Fruit Marketing in Sydney 36, 37
Fungus Disease Control 5
Gas Storage of Fruit 4
Home Circle 39
Junior Section 32
Letter to the Editor 4
Market Grower 11
Market Notes and Prices . 37, 38
Motor Section 33
News in Brief 3, 4
New South Wales 31, 34-37
New Zealand News and Notes 20, 21
Nitrogen and Fruit Production 22
Obituary 12
Peach Growing 28
Personal 4
Poultry Notes 2
Retailers, Among the 25
Soil Fertility in the Orchard 7, 10
South Australia 27, 28. 29
Tasmanian News and Notes 31
Thrips Plague Unlikely 12
Victorian Notes 29. 30
Western Australia 18

About 200 growers attended the highly successful Field Day under the auspices of the Victorian Fruit Marketing Association and the Gippsland Fruit Marketing Association at Mr. J. J. Ahern's orchard at Pakenham, Vic., on July 28.

PERSONAL

Mr. P. H. Thomas, Chief Horticulturist, Tasmanian Dept. of Agriculture, leaves for the Pacific Coast of U.S.A. and Canada early in August to observe the harvesting, packing and distribution of their 1936 Apple and Pear crop.

Mr. G. T. Spurway, who died recently at Homebush (Sydney), was a brother of Mr. F. Spurway, the well-known Ermington nurseryman, and a grandson of "Granny" Smith, raiser of the famous Apple. The deceased was employed in the Railways Dept. for a long period, retiring about eight years ago.

Mr. W. L. Gregory, who is now the manager of the South Australian office of the Gerrard Wire Tying Machines Company, is taking great interest in the preparing and packing of Apples and Pears for export. At the present time he conducts Apple packing classes for junior packers at Blackwood and Parracombe. His efforts in this regard are greatly appreciated, and should be helpful in improving the packing of fruit generally in South Australia. Mr. Gregory is well known to fruitgrowers throughout every State of Australia, and sends his best wishes to his many grower friends.

The friends of Mr. Walter Musgrove, J.P., Vice-President of the N.S.W. Chamber of Fruit and Vegetable industries will be pleased to learn that he has completely recovered from a serious operation, and is back at the City Markets, where he has been for many years conducting business as a fruit merchant.

Letter to the Editor

The Editor,
"Fruit World and Market Grower."

Sir,

Re Gas Storage of Fruit.

In your issue of the 6th July, it is stated on page 14 that it is believed that this Council has an officer in England studying the question of gas storage.

In this connection, I would like to draw your attention to the fact that for the past four years gas storage trials have been in progress under the supervision of Dr. S. A. Trout, an officer of this Council, working at the Government Cool Stores in co-operation with the Victorian Department of Agriculture. At that place work has been conducted with Apples, Pears, Grapes, Peaches, Plums, Oranges, and Passion Fruit. Recently work on gas storage of Apples has been initiated in Tasmania.

The results obtained in Melbourne have indicated that gas storage injures Plums and Oranges and certain varieties of Apples, including the Jonathan, and that it is of doubtful benefit for the storage of Pears and Passion fruit. The only promising results so far obtained have been with Peaches, but even with this fruit storage life has not been increased by more than 50 per cent.

Because promising results have been obtained with gas storage in England, it does not necessarily follow that similar results would be obtained in Australia, for the reason that the reactions of fruit to gas storage depend on the variety of the fruit, the growing conditions, and the maturity at the time of picking. Such reactions would have to be studied before the general application of gas storage could be advocated in Australia. In any case, it is doubtful whether gas storage would ever be worth while in this country, as there is now practically a continuous supply of good Apples, Pears and Oranges throughout the year. At present the only virtue of gas storage appears to be as a supplement to cool storage in the overseas transport of Peaches.

Yours faithfully,
G. Lightfoot,
Secretary.

Council for Scientific and Industrial Research.
Melbourne, 20/7/36.

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Fungus Disease Control

Brown Rot, Peach Rust and Pear Black Spot.

Latest Scientific Methods Described by Mr. S. Fish, M.Agr.Sc., Government Biologist, in Meetings at Shepparton E. and Kyabram.

AT the request of the Northern Victoria Fruitgrowers' Association, Mr. S. Fish, M.Agr.Sc., Government Biologist, delivered lectures at two centres in the Goulburn Valley on the Brown Rot, Peach Rust and Black Spot of Pear investigations which have been conducted by the Biological Branch of the Department over the past three years. The Kyabram lecture was attended by 80 growers, and the lecture at Shepparton E. was attended by more than 200 fruitgrowers.

Mr. W. Young, president of the N.V.F.A., who was Chairman, said that his Association was particularly interested in the work which had been carried out, and had aided the Department in the matter of finance where necessary.

Commencing his address, which was illustrated with lantern slides, Mr. Fish stated that both

Brown Rot and Rust

had caused, over the past few years, serious damage to the Peach industry in the Goulburn Valley, and that three years ago investigations were initiated at the request of the N.V.F.A. into the two problems.

The object of the work was to obtain an economic control of:—

(a) Brown Rot blossom blight.

(b) Brown rot development in fruit, both at the orchard and at the canneries.

(c) Rust on Peaches.

The canneries of the area also co-operated with finance on that phase of the problem, which was concerned with the control of Brown Rot at the cannery.

The

Field Experimental Spraying

work was conducted on Mr. Pickworth's property, Ardmona, where four acres of Golden Queen Peaches were used for Brown Rot experiments, and four acres of Thiele Peaches for Peach Rust control experiments.

Methods of Over-Wintering.

The investigations showed that under Goulburn Valley conditions the Brown Rot fungus (Sclerotinia fructicola), over-winters by means of mummified fruits on the tree and ground, and also to a much lesser extent on infected twigs even where they have been removed from the tree at pruning time.

These mummified fruits have the capacity of imbibing moisture and produce periodically crops of spores at blossoming time.

Infected twigs are produced by the fungus working up the diseased fruit into the twigs and some of which will produce crops of spores in the Spring.

Last season a fifth method of carry over was discovered for the first time in Victoria, and in the Goulburn Valley. This was the "perfect" stage of the fungus. This apothecial stage is produced from buried or partly buried mummies, which have been undisturbed since Autumn.

In appearance it is a small mushroom body shaped like a wine glass. These apothecia are produced at a time which corresponds with the flowering period of Elberta Peaches. These bodies which may be produced within a few inches from the trunk of a tree, eject spores into the atmosphere at blossoming time, which, with the spores from sources mentioned previously, may infect blossoms with Brown Rot.

Secondary Infection.

THE INFECTED BLOSSOMS turn brown, many remain attached to the trees, and produce crops of spores during Spring and Summer. The fungus works up from the infected blossoms into the laterals and cankers are produced. On these cankers tufts of spores are produced from time to time, according to the weather, and a load of Brown Rot spores is built up on the developing fruit. Green fruits are not liable to infection unless injured. The injuries caused by the activities of the larvae of the

Oriental Peach Moth

form suitable entrances for the initiation of Brown Rot infection in green Peaches, as well as mature Peaches. Mature Peaches are under certain conditions capable of being infected by Brown Rot without an injury, either when still in the orchard or at the cannery.

Conditions Favorable for Fruit Infection.

A temperature of 78 deg. F. is the optimum temperature for Brown Rot infection. A high relative humidity such as is produced by frequent showers and an overcast sky is very favorable for infection. A heavy spore load will produce a high percentage of infection with a short burst of favorable conditions. Fruit injury by insects or some other cause aggravates the position and the excessive use of nitrogenous manures also favors Brown Rot infection.

Control Measures.

Summarising the progress results of three years of experiments conducted at Ardmona, Mr. Fish showed by tables and graphs that the following methods significantly reduced Brown Rot blossom blight and fruit infection, both at the orchard and at the cannery, and also reduced to a minimum Peach Rust.

A.—The measures necessary to prevent the over-wintering of Brown Rot fungus were:—

1. Remove and destroy all mummified fruit from trees.

2. At pruning time burn all prunings and mummified fruit present on the surface of the soil.

3. Plough the ground before applying a Bordeaux 6 : 4 : 40 for Peach Curl and Brown Rot blossom blight.

4. All angular strips left at the base of trees after ploughing must be worked over and the mummies destroyed in order to prevent the formation of the perfect stage of the Brown Rot fungus.

B.—Spray programme to be conducted in conjunction with the sanitation outlined above.

5. Apply Bordeaux Mixture 6 : 4 : 40 at the late dormant period or early pink bud stage.

6. Apply dry mix lime sulphur (63 per cent. of very finely divided sulphur, 30 per cent. of calcium hydroxide (slaked lime) and casein spreader) at the rate of 25 lb. to 100 gallons at the following stages:—(a) early October; (b) end of November; (c) end of January, and (d) middle of February.

A spray deposit is left on the Peaches with the above schedule, but this is washed off at the cannery during the normal processing.

Peach Rust.

Observations on the disease have indicated that the life cycle of the fungus locally is in all essential aspects similar to that in other countries. Some of the young leaves soon after unfolding in the Spring are infected by rust. The source of this infection is derived from young twigs which were infected during the previous Autumn, but did not break forth into rust until Spring. Once the rust is established in the young leaves it may give rise to secondary infections. Fruit infection occurs in the Summer and is associated with wet conditions.

After three years investigation on a very susceptible variety of Peach to rust (Thiele) it was shown that a series of dry mix lime sulphur cover sprays as used for Brown Rot control gave a control of rust even under conditions extremely favorable for rust infection. The dormant or pre-blossom sprays had little or no effect on rust, all the control being obtained with the dry mix lime sulphur cover sprays.

Black Spot of Pears.

At the request of the growers a short account was given of the Black Spot of Pear experiments, which have been conducted at Doncaster. **Mr. Fish said that the principal source of over-wintering of this fungus was in the infected leaves which had fallen to the ground during the previous Autumn.**

In the Spring the spores are ejected on the developing leaves, and the first sign of infection on the fruit is generally about three weeks after the fruit has set. The investigation showed that the Spring spot which was produced was the source from which later secondary infection occurred during the late Spring and the Summer.

The following recommendations, based on the experimental work were made for the control of Black Spot of Pears:—

1. Spray with Bordeaux Mixture 6 : 4 : 40 just as the young folded leaves protrude from the bud.

2. Spray with Bordeaux 6 : 4 : 40 as the young folded leaves have separated from the closed blossom buds.

3. Apply Bordeaux 3 : 3 : 50 three weeks after the fruit has formed.

This programe, while giving a consistent control of Black Spot of Pears, might cause a slight russett. It should, however, not be used on Josephine Pears.

Questions covering a very wide range of related matters were asked, and were satisfactorily answered.

At the conclusion of the lecture a vote of thanks to the speaker was moved by Mr. Roy Lees. Mr. Fish briefly responded, thanking the Northern Victoria Fruitgrowers' Association and Mr. E. Pickworth for their co-operation and assistance.

APPLE LEAF-HOPPERS.

Spring Spraying Necessary.

FOLLOWING a severe outbreak of Apple leaf-hoppers (jassids) in orchards of the north-eastern section of Victoria last season, tests were carried out by the Department of Agriculture to ascertain what control measures, if any, could be successfully applied. This was the first outbreak of this kind in the Apple orchards of this State.

The Director of Agriculture (Mr. H. A. Mullett) states that in view of the nature of the damage caused, and the large number of orchards affected, it was expedient to place before growers the main facts relative to the control of the insect.

The peak of the outbreak was reached during March, and by harvesting time extensive tree injury and fruit blemishing had been caused. The species of jassid concerned was Typhlocyba australis Frogg. For a number of years the same insect had caused damage in Apple orchards in Tasmania, N.S.W. and S.A.

The injury which resulted from the insects' activities was such as to debilitate the trees and to a certain extent endangered the Apple crop on them for the following season. A more serious injury involved the disfigurement of the fruit itself, as the result of deposition on it of insects' excrement. The removal of this blemish increased considerably the cost of marketing the fruit.

An endeavour was made to find a spray material which, even as late as February, might prevent the insects from causing further injury to the trees and fruit. Each of six treatments was applied to ten trees, care being taken to reach the under side of the leaves with the spray. As a result of these investigations, which were carried out by Mr. K. M. Ward, Assistant Entomologist, the following recommendations were made:—

Since jassid infestation arises early in Spring from over-wintering eggs, it was essential, in the absence of any known method of destroying the Winter eggs, to use contact sprays during the Spring. A spray should be applied before any of the insects reach the adult egg-laying stage, and another would probably be required about three weeks later, to destroy jassids emerging at a late hatching. Such a spray should consist of nicotine sulphate 1 pint, hard or soft soap, 2 pounds, and water, 80 gallons; alternatively 1 pint of nicotine sulphate and 1 gallon of white oil per 80 gallons of water could be used alone or included in the codlin moth spray programme.

During any season in which jassids were prevalent in Apple orchards, it would be advisable to include nicotine sulphate in all codlin moth sprays. In controlling jassids it was essential that the spray should reach the under sides of the leaves if the best results were to be achieved.

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CONTROL OF BLACK SPOT.

Reader Outlines Control Measures for Apples and Pears.

Mr. J. H. Jacklyn, previously a fruitgrower in Tasmania, and now of the Fruit Exchange, Brisbane, writes under date, June 24, 1936, as follows:—

To the Editor "Fruit World."

Sir,

I notice in the "Fruit World" of June 5, 1936, another programme, or rather two for the control of black spot on Pears, by P. H. Thomas, Chief Horticulturist, Department of Agriculture, Hobart, Tas.

These programmes look very nice on paper, but to have to carry them out is quite another matter; if Mr. Thomas will eliminate all the sprays in the No. 1 programme except the 4-4-40 Bordeaux in the calyx stage; and spray the trees thoroughly, he will get 100 per cent. marketable fruit.

In the No. 2 programme, he shows 94 per cent. clean; he would have got the same result with 2-2-40 in the calyx stage (this is when the bloom is beginning to fall, the calyx is then well open to receive the spray). He also states calyx spray omitted all varieties, 60 per cent. marketable; which goes to show there is no control of the spot without the calyx spray, he virtually admits this; he would get this result from the pink stage spray as this is the commencement of the calyx stage.

This proves what I have stated before, that all Bordeaux sprays put on before the calyx opens and after it closes are valueless in the control of the spot. In No. 1 programme there are two 6-4-40, but he does not state whether it is 6 lime 4 bluestone or vice versa, and the same with the two last, 1½-2-40 in No. 1 also.

But why make a programme of sprays for Pears and another for Apples, which I have seen under the same heading; and quite different from each other; the spot is one and the same on both Apples and Pears, and needs the same treatment, except that Pears do not get russetty so easily as Apples; and this can be avoided by reducing the strength of the spray for Apples when it begins to show; also the same applies to Pears.

I have seen a great deal that has been written and a great number of spray programmes issued by our scientists and experts on the control of black spot, but have not yet seen any statement as to how it comes on to the fruit, whether it comes through the sap and then through the skin of the fruit, or whether it floats in the air and falls on the fruit and then increases; I heard this last theory put forward about 36 years ago by a Government Expert now retired, and the same thing about two years ago by a young man in the same position, advising orchardists to rake up all leaves and cuttings and destroy by fire to prevent the spores from getting on the trees and fruit when it came again; no advancement in all that time.

Now, I am quite certain it comes through the sap; reasons for so believing are as follow: All sprays for spot before the calyx begins to open (that is the pink) are worthless, and all after the calyx closes are the same; I have seen Apples sprayed in the early pink stage only, and they were free of spot. When picked, these were put in the Apple house and kept about six weeks, and when opened they all had spot more or less. This must have come through the skin of the Apple. Apples and Pears in the same orchard sprayed in full bloom and onward, were perfectly clean and remained so; many of the Apples kept in Apple house until September, and both sprayings were 4-4-40 Bordeaux, showing that the spray gets on to the calyx and then is effective as long as the Apple is an Apple; and no danger of late spot or infection from spores, etc.

This goes to show the calyx is not open in the early pink stage sufficiently to allow much spray to enter, hence the late spot.

There is no theory in this, it is practical experience.

VICTORIA: APPLE AND PEAR BOUNTY.

The Governor in Council has approved of the appointment of Messrs. E. J. Holland, J. M. Wood and W. H. Breen as members of the Fruitgrowers' Relief (1936) Committee, which will administer in Victoria the Federal Apple and Pear Bounty Act.

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THE CODLIN MOTH PEST

U.S.A. Still Seeking a Remedy.

Sensational Remedy Not Realised.

MR. E. RAY, of Kelso, near Bathurst, N.S.W., recently drew attention to an article published in the November, 1935, "Fruit World" describing a new method for controlling the codlin moth and promising full details.

The full details were published in our issue of May, 1936, in which Dr. Webster pointed out the limited success with calcium arsenate.

Our American correspondent writes with regard to this matter.

"The sensational developments anticipated from Mr. Marshall's researches have not been realised.

"At the time of sending my first announcement, the papers here gave great prominence to this matter, and I sent the information forward by first mail—evidently just in time for the November, 1935, "Fruit World."

"Had I delayed a week the article would have missed the issue referred to: I got into touch with the authorities and found that the press reports were too optimistic.

"I then arranged for the full story to go forward and I note this was published in the May issue of the "Fruit World and Market Grower." There is nothing to add to that very thoughtful and appreciated article, but to say that all our research workers are seeking most earnestly for the most effective remedy for his major pest."

Further information from Mr. Marshall and Dr. Kermit Groves will be published next issue.—Ed., "F.W. & M.G."

CODLIN MOTH IN PEARS.

Tests in Goulburn Valley.

An investigation into the factors necessary for a consistent control of Codlin Moth in Pears will be initiated by the Biological Branch of the Department of Agriculture, Victoria, this season.

The laboratory work will be conducted at the Plant Research Laboratory, Burnley, and in the Goulburn Valley. The experimental field spraying work will be carried on on ten acres of Williams Pears on Turnbull Bros.' orchard, Ardmona.

Mr. S. Fish, biologist, and Mr. R. T. M. Pescott, entomologist, recently met the executive of the Northern Fruitgrowers' Association and arranged for all the facilities required and were assured of the full support of that organisation. The resources of the Biological Branch will be behind this work, and Mr. L. Miller, B.Agr.Sc., assistant Entomologist, will be located full time in the Goulburn Valley on this work, and will have the co-operation of Messrs. R. T. M. Pescott and K. M. Ward.

CANADIAN APPLE CROPS.

In the Okanagan Valley, British Colombia, Apple crops are shaping well. Abundant rains, warmer weather needed to improve crops. Hail in some sections during June will lower grades, but will not affect tonnage.

In Nova Scotia Apples sizing well, except where damaged by recent heavy frosts. Black Spot showing up in Ontario; a good average crop is developing.

Soil Fertility in the Orchard

ARTIFICIAL AND GREEN MANURES

(By Frank M. Read, M.Agr.Sc., Chief Inspector of Horticulture).

Illustrations and Article republished by courtesy of the "Journal of Agriculture," Vic.

FRUIT growers, as a class, are firmly convinced of the value of applying artificial fertilizers to their soils, and to-day that practice is general throughout the industry. There are, however, radical differences between the practices of even neighboring orchardists, and most fertilizing programmes are characterised by a lack of definiteness.

During the last decade there has been a marked change in the character of the manures used in Victoria. Approximately £100,000 is expended annually by the horticultural industry on manures, and, whereas ten years ago the emphasis was largely on phosphatic fertilizers, it rests now more strongly on nitrogen.

Such a marked change in practice might suggest that a great deal of money has been wasted in artificial fertilizers, for there is no corresponding change in orchard conditions to account for the difference. It probably indicates also that at the moment a great deal of money still is being wasted, for he would be unduly optimistic who would say that we know at present all there is to be known about this important phase of orchard work.

It is also of interest to reflect that the widespread use of artificial fertilizers is not matched by consistent experimental results supporting their use. The reverse is rather the case. A study of the experimental results in this and other countries over the past half century does not give any clear indication as to the position likely to exist in Victoria. Briefly, one might say that no very definite response to fertilizers has been obtained from fruit trees in the heavier types of soil, even where manures have produced marked responses in annual crops or grass, and it would appear that in such soils a deficiency of any element shows itself on most other crops long before it is evident on fruit trees. Growers are often apt to estimate the advantages gained by trees from the response in the natural herbage beneath the trees. The two, however, do not always run parallel.

Nitrogen has caused a definite response in many places on soils of the sandy or gravelly type, which are usually low in this constituent but it has not shown a consistent significant influence on heavier types of soil.

Lime seems to have produced no consistent response in trees under conditions which produce very marked responses in legumes and other crops.

Phosphoric acid, even in soils known to be comparatively low in that element, does not seem to have had anywhere a significant effect on the growth and yield of most fruit trees, certainly not Apples.

Potash, until recently, had shown no remarkable effects on fruit trees, but since the war, as a result of the research work of the Long Ashton Station at Bristol, it has been established as an essential on many areas in England, and attention has been directed to it in other parts of the world. In America the use of potash has not yet been established on a definite basis, and the same may be said of Australia, although the opinion is growing that we may yet find, with better methods of use, a place for it.

Organic Matter.

Everyone is agreed that, for an orchard to maintain fertility, the supply of organic matter must be maintained. In the natural state the soil supports a very varied population. There are first of all the trees, secondly beneath them are the surface plants, and within the soil are the teeming millions of tiny creatures, far too small to be seen by the naked eye, and known under the general name of soil organisms.

Orcharding, as it is generally practised in Australia, by clean cultivation and frequent stirring of the soil in the hot summer months, undoubtedly tends to upset the balance of nature by the elimination or, at all events, great reduction in the growth of the second group, the surface plants.

The life and decay of the surface plants provides most of that organic matter which is required by the soil organisms in order that they may flourish, and it therefore follows that as the surface plants are reduced and the soil organic matter or humus is depleted the soil's population of organisms declines.

The gravity of this change may be understood when it is realised that it is principally due to the life processes of the soil organisms that the soil nutrients become available to the trees, and so, as their number falls, soil fertility inevitably declines also.

It can therefore be taken as a maxim that **the yearly ploughing under of a liberal amount of green stuff is a first essential in orchard management**, and it is almost as true that where the growth of natural green stuff is abundant and is plough-

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ed under suitably, the position on that orchard is generally quite satisfactory.

Provision of Green Manure.

There would appear to be three main methods of providing soil humus in addition to the application of farm yard manure and straw, and so on:—

1. We can sow a crop of Peas, Beans, Oats, Barley, Rape, or, in fact, any crop which will grow well and give a good bulk within a few months. In general, the leguminous crops are preferable when they will grow strongly; but if they will not thrive the crop most suitable to the district should be sown. It is essential that such a crop be sown early so that it secures a good start before the cold weather comes. March is the best month from this point of view. I know many orchardists will say that they rarely have time to put in a green crop, and that, any way, harvesting operations extend into March, and later still, so that if a crop were sown it would be trampled on and spoiled. It is undeniable that some orchardists do, nevertheless, manage to sow the crop satisfactorily, generally by doing alternate rows in alternate years so that there is still room to reach every tree without walking or driving over the sown area.

2. We can establish such a plant as subterranean clover, which will reseed itself naturally. This has been done with apparently satisfactory results. There does not appear to be much difficulty in reseeding subterranean clover when it is ploughed under, as is the general rule at present, in September or later, for the plants go on maturing after ploughing, and until the surface is broken down by the cultivators and harrows. But the tendency in many districts now is toward earlier ploughing to avoid ascospore infection in the control of black spot of Apples, to improve conditions for fruit setting, and to minimise competition for soil moisture between trees and greenstuff, and so on. If this desirable tendency be followed, therefore, it would be wise to leave the unploughed strips of clover between the trees until the seed has formed.

A good crop of Tick Beans on a Citrus grove; Volunteer Barley also is showing.

3. The third alternative which may be useful as a stop-gap, but which would not appear to be as permanently satisfactory as the two above, is to allow the miscellaneous herbage to grow by ceasing cultivation in late February or early March. This can probably be encouraged by top-dressing with artificial fertilizers in autumn.

Super. or sulphate of ammonia, has in general given most noticeable results to date. The final choice between these two fertilizers should be made after trial. On the whole, super. tends to be more generally effective for this purpose in the northern orchards, while a nitrogenous manure, such as sulphate of ammonia, is more usually effective in the south of the State. These results, however, depend largely on the type of herbage. Clovers seem to prefer super., while capeweed responds more usually to nitrogen. The results from grasses are variable.

Manurial Requirements of the Tree.

The grower too often bases his manurial practice on his estimate of the loss to the trees and the soil occasioned by the taking off of succeeding crops. This is quite an unreliable method, for it can be taken that, as a general rule, comparatively little of the soil nutrients go into the actual crop, most being required to develop the framework and other growth features of the tree.

"Which fertilizer makes fruit?" is a question sometimes asked by growers. In answer it may be said that no fertilizer makes fruit as distinct from growth, but that any one or all of the fertilizers may affect the growth characters of a tree, and thus indirectly affect its yield.

There are very good grounds for believing that if tree growth be satisfactory, yield automatically will be so; from which it would follow logically, that growers should decide their manurial practice more upon the appearance of their trees, and less upon the crops they have borne or are expected to bear.

Where fertilizers further a more healthy growth and appearance in trees previously unsatisfactory in health, they usually improve the yielding capacity of the tree also. **When tree health suffers, the grower must apply fertilizers to conserve his main asset.**

It is not intended to convey the impression that **increased growth in all**

★ITS ANALYSIS—2 : 2 : 1 Mixture contains:

8¼% NITROGEN (as Sulphate of Ammonia).
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H 15/36

cases will be accompanied by increased yield. This would only be so in trees previously showing too restricted growth. The most fruitful condition in fruit trees is one of **medium growth,** with good healthy appearance of leaves and wood.

The subject may be viewed from a slightly different angle by asking and answering a further question: "In the event of a shortage of any element is the growth and foliage first affected, or does the yield decline while the tree to all other appearances remains normal"?

The available evidence indicates that the first signs of a mineral deficiency are to be seen in the foliage.

Experiments on Apples at Upper Beaconsfield, on a poor soil, showed that unmanured or improperly manured trees do not make anything like the amount of growth made by those on adjacent manured plots, nor is the appearance of the foliage satisfactory; but during the trials the yields of the unmanured trees did not decline seriously by comparison, although it was obvious that if faulty growth conditions had been allowed to persist they must soon have resulted in low yields from the actual dying back of the trees from the tips.

In England the disease known as Leaf Scorch, which has been associated with potash deficiency, has been extensively studied. It has been found that, in the case of Plums, the deficiency is marked in leaves and stems, which, when analysed, are seen to contain very much less potash than normal specimens; but this deficiency is not nearly so marked in the pulp of the fruit, while in the fruit kernel of the affected tree the potash content is practically normal. This is a further indication that when the tree is starved of any particular element—in this case, potash—the leaves and shoots suffer long before the vital organs—the fruit, and seed. This is in accord with the effects accompanying starvation of the animal body, where the vital organs remain perfectly sound until a very late stage in the process of starvation.

This leads again to the very important conclusion previously mentioned that **if the tree is growing in a healthy fashion it is not likely that the yield of that tree will be increased materially by applications of fertilizers.**

On the other hand, it points to the necessity for maintaining healthy growth, for only when that is obtained will the tree continue over a period of years to increase its bearing surface, and thus its ability to carry larger and larger crops.

There are orchards on soil quite rich enough to supply the whole mineral needs of the trees, and on such soils growth will be healthy without manure, while the benefit to be secured from fertilizers would be negligible. There are, nevertheless, many soils which will not give the growth desired, and on these the fertilizers suitable to them will prove of inestimable benefit.

There is room for a great deal of experiment, not only in the trying out of fertilizers on orchards previously somewhat neglected, but also on heavily-manured orchards on rich soil, where it would be of great interest to leave some trees entirely unmanured for comparison.

Natural herbage in adjacent rows showing benefit of top-dressing with nitrogen. Note the Cape Weed right up to the crotch of the tree. It is of a good dark-green colour.

Symptoms of Deficiency.

In the case of Apples, the experiments conducted in this and other countries enable the appearance of the trees to be used as a fairly accurate guide to the exact fertilizer to be added in each case of faulty growth. Lack of **nitrogen** results in very restricted growth, reddish bark, small yellow-green leaves, which develop bright yellow tints before falling and fall, particularly at the base of the tree, very early.

Lack of **phosphoric acid** under experimental conditions, although it has never been noted in the field so clearly as in the case of nitrogen, results in poor growth, small and very narrow dark-green leaves, with a tendency to develop purple colored margins. These leaves usually develop very bright tints before falling. They tend to defoliate very early, and bud burst in the spring is usually very delayed. Dying of buds is very prevalent.

Lack of **potash** does not restrict growth apparently as much as either of the former two, but renders the leaves susceptible to severe scorching around the margins and the development of a flat green color throughout. It also causes early defoliation from the tips of the shoots on which marginal leaf scorch has been pronounced. This deficiency is apparently very widespread in England, and occurs occasionally in the field in Australia.

Although it is already known that other fruit trees behave in a manner similar to Apples, their reactions are not so well known, owing to less research having been performed in their cases.

Importance of Balance.

One of the most important developments of recent years has been the conception of balance in fertilizers, and it appears probable that the balance existing between the various nutrients present in the soil is more important by far than the actual amounts. As an instance, let us consider leaf scorch of Apple leaves, to which we have referred as a symptom of potash deficiency. Strictly speaking, it appears to be a symptom of bad balance between nitrogen and potash, and it may be corrected by either increasing the potash or by lowering the nitrogen. In certain cases in England the trouble has been corrected more rapidly and more efficiently by simply allowing the grass to grow beneath the trees, and so lowering soil nitrogen, than by applying to the soil quite heavy applications of sulphate of potash. Several other cases of balance have also been studied, and sufficient is known to support the view previously expressed that balance is a most important consideration.

In practice this is reflected by the great increase in the use of complete fertilizers, and the compounding of these mixed fertilizers along lines which make them much more truly balanced than the type of complete fertilizer to which horticulturists were accustomed, up to, say, ten years ago, or even less.

General Recommendations.

There is still room for research and improvement of these mixed fertilizers, although the variation in soil conditions from orchard to orchard, and district to district, will make necessary for a long time to come a fair degree of approximation. In Victoria the use of complete fertilizers is on the whole recommended, except in cases where a definite deficiency is established by careful observation. For instance, where tree growth is very poor indeed and leaves are small and yellowish, a nitrogenous fertilizer such as sulphate of ammonia or nitrate of soda may be used alone for a time until the trees improve. Again, if leaf scorch of Apples were to occur seriously the use of potash alone would be desirable until such time as this symptom of potash deficiency had disappeared.

Where soil humus is maintained in the manner described previously, the most satisfactory

type of fertilizer

to use is the readily soluble quickly-acting form applied either in autumn for the benefit of the greenstuff, or in spring, two or three weeks before bud burst, for the more immediate benefit of the tree.

Nitrogen, in the form of sulphate of ammonia; phosphoric acid, in the form of super-phosphate; and potash, in either the sulphate or muriate (except in the saline areas where the muriate should not be used) should, singly or in combination, supply the needs of most orchards. All of these, of course, will not be needed in every case.

The quantities of fertilizer to be applied will vary with tree size, and the following suggestions refer to medium-sized trees:—

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Gargoyle RED Spraying Oil

Potash deficient tree showing defoliation of tips of affected shoots.

For Autumn broadcasting or drilling in with the green crop, superphosphate or sulphate of ammonia should be used at the rate of 1 to 2 cwt. per acre, in accordance with the conditions previously discussed.

For Spring application to deciduous trees, 3 lb. of 2:2:1 mixed manure, which contains 2 parts of superphosphate, 2 parts of sulphate of ammonia, and 1 part of sulphate of potash is to be recommended, except when growth is very restricted and leaves are yellowish. In such cases 3 lb. of sulphate of ammonia is to be preferred for a year or so, until growth improves.

Citrus trees, on general results so far obtained, would benefit from 3 lb. of sulphate of amomnia just before the Spring growth period, and again just before the main Autumn growth.

PLANT PROTECTION BY THE AID OF THERAPEUTANTS

by G. H. Cunningham, D.Sc., Ph.D., F.R.S.N.Z.

Director, Plant Protection Services, Plant Research Station, Palmerston North, New Zealand.

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Methods of Application.

Having decided on sound lines that one or more artificial fertilisers are required, the grower is still faced with problems of great magnitude, for it does not necessarily follow that by applying them to the soil they are actually caused to be absorbed by the tree's roots. In fact it is certain that very little of the fertilizer applied is so absorbed, even under the most favorable conditions.

There are several reasons for this. Firstly, the root system of the average orchard tree is situated in a zone some distance from the surface, and the fertilizer must penetrate to this zone through a blanket of surface soil. During its progress nitrogen tends to be rapidly absorbed by the roots of the surface-growing plants, but is otherwise able to move downward without much obstruction.

Phosphoric acid and potash, however, move downwards with great difficulty. Chemical reactions rapidly convert the soluble phosphoric acid into an insoluble form, and the potash, particularly in those soils in which potash is necessary, is absorbed by the clay particles very rapidly indeed, and held there in a form no more available to the tree than much of the potash previously in the soil.

It is important therefore, that, in applying fertilizers, they should be placed as deeply as possible, either by being broadcast and then ploughed under immediately, or by being placed in deep furrows.

In short, every means at the orchardist's disposal should be used to place the fertilizer in the actual effective root zone. From this point of view irrigation water, or liberal falls of rain, are of the greatest importance, and should be fully exploited to wash down soluble fertilizers.

Good General Orchard Management.

In conclusion, a warning should be given that the problems of soil fertility do not reside completely or even mainly in the use of artificial fertilizers. Too often the grower is apt to regard artificial fertilizers as a panacea for all the ills to which orchard trees are heir. But the truth is that at best they are but a subsidiary measure to all those items of good orchard practice and intelligent soil management, which keep the soil in a physical state to afford the trees' root systems a congenial and comfortable home.

Summary.

1. The lack of a definite manurial policy on the part of many growers is a cause of monetary loss to the industry.

2. The provision of ample humus by one of several means outlined is a pre-requisite of orchard soil fertility in Victoria.

3. The grower should base his manurial practice on the appearance of his trees, and not on the crops they bear.

4. Lack of each fertilizer gives rise to characteristic growth features.

5. Balanced manuring is essential, balance being more important than the actual amounts of fertilizers present. In this respect a good deal of approximation is still unavoidable.

6. Readily soluble types of fertilizer, such as sulphate of ammonia, superphosphate, and sulphate of potash, are preferred to more slowly available forms.

7. Autumn applications for the benefit of greenstuff may be either 1 to 2 cwt. of sulphate of ammonia or superphosphate, depending on conditions which are discussed.

8. Spring applications should be made two to three weeks prior to bud burst of deciduous trees; and for medium-sized trees should consist of 3 lb. per tree of either 2:2:1 mixture or sulphate of ammonia.

9. For citrus, 3 lb. of sulphate of ammonia in Spring, and again in Autumn, is good practice.

10. Owing to the danger of fertilizers being fixed by the soil before they can be absorbed they should be introduced, if possible, into the actual root zone by deep ploughing, or by irrigation or rain water.

11. At best artificial fertilizers can be only a subsidiary measure to those items of sound soil management, which keep the soil in good physical condition.

Nitrogen deficient tree showing very reduced growth and defoliation commencing at base of the tree.

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The N.S.W. Senior Fruit Instructor (Mr. H. W. Eastwood), states that Banana production in N.S.W. for 1936 is likely to exceed the record 1935 total by 22,000 cases. In 1935, 1,208,839 cases were produced.

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Extract "BETTER FRUIT," U.S.A., February, 1934: "Idaho Spray Programme for Codlin Moth Control, 1934," by Dr. Claude Wakeland, Department of Entomology, University of Idaho. Experiments in the State for the past six years have shown that LEAD ARSENATE is the best, as well as the most economical insecticide that we have tested for Codlin Moth control. Entomologists are agreed that there is no substitute for Lead Arsenate that can be recommended to the public.

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Fertilisers for Potatoes.

IN reply to a query as to what would be the most profitable manure for Potatoes—Tomato manure at the rate of 8 cwt. to the acre, or 8 cwt. bone dust, ½ cwt. ammonia, and ½ cwt. potash mixed per acre, Mr. A. G. Strickland (Chief Horticultural Instructor, South Australian Deparement of Agriculture), in "The Garden and Field," states:—"In the absence of definite experimental evidence, it is impossible to compare the two fertiliser dressings mentioned, and, in fact, available information tends to suggest, as best practice, a dressing which differs from the two which have been quoted, i.e., 3 to 6 cwt. of super., plus 1 cwt. of sulphate of ammonia per acre. Bonedust may be used as substitute for portion of the super, if applied rather more heavily than super, but it should be noted that bone fertiliser is much slower acting than superphosphate. The latter fertiliser is able to fully benefit the crop in the season of application, but the beneficial effect of bonedust will be spread over several seasons.

"So far, there is little evidence that potassic fertilisers will increase yields, although there are indications that when used in the form of sulphate, quality of the Potatoes is improved. The issue is not clear-cut, however, and as potash is an expensive fertiliser, heavy dressings could not be freely recommended. An occasional dressing of ½ to 1 cwt. of sulphate of potash per acre should be sufficient to ensure ample potash for production of quality crops, and until further experiments have given results, it must be said that the need for potash is not marked."

Method of Applying Fertilisers.

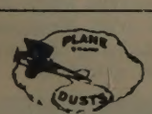
The quick-acting fertilisers—superphosphate, sulphate of ammonia, and sulphate of potash, are best applied in the furrow at planting time. If bonedust is used, with the object of long-range improvement in soil fertility, this fertiliser may be applied broadcast some considerable time before planting.

Form of Potash Fertiliser.

Sulphate of potash is preferable to muriate of potash; it has been stated that whereas sulphate improves quality, muriate may have the reverse effect.

Availability of Bone Dust.

Bone dust is a relatively insoluble and slow acting fertiliser, and the total amount of plant food in any quantity applied to the soil only becomes gradually available over a long period. Although some small benefit might accrue in the season, of application of bone dust, the main benefits must be looked for in future seasons. For quick results, always use superphosphate as a source of phosphoric acid."



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BLANCHING CELERY.

When the first earthing up is done depends a great deal on where Celery is being grown; further, the method differs from district to district. Some growers have a golden rule that Celery should always receive the first earthing-up about the end of January. Such definite dates always help to keep us up to the mark, but are not really very satisfactory. It depends so much on the time of planting, the soil, variety, and the man who is growing the crop. It is preferable to note that with most varieties of Celery you should complete the earthing up at least seven weeks before you market. Other districts have different ideas on Celery planting. They usually try to give the first earthing-up when the plants are about 7 inches high, and another when they are 14 inches high. Three weeks after this a third banking is done.

Nearly all this work is done by a digger plough, though this may often follow a horse scuffle, so that sufficient earth may be loosened. The operation known as "topping" is done, say, a week or ten days after the final earthing. This is a hand operation, and consists of packing the soil right round the plants and attempting to prevent the Celery from being frozen.

At the second earthing a dressing of sulphate of ammonia is given, at the rate of 3 cwt. per acre. One cwt. could have been given at the end of January, 1 cwt. a fortnight later, and the final cwt. some time later. —("Tas. Fruitgrower.")

15 MILLION SACKS.

For Maine Potatoes.

The Aroostook county in America's smallest State of Maine, requires 15 million sacks every year to carry its crop of Potatoes, according to the "N.Y. Packer" report. This represents an expenditure of over one million dollars for sacks alone. After bagging the tubers, it requires 50,000 railway trucks to get the enormous annual crop to the New York markets. Several sizes of sacks are used, but besides those Potatoes which are packed in sacks, huge quantities go forward loose in trucks, others in boxes, and 25 lb. packages for convenient handling in domestic markets. Peck, one bushel, two bushel and 165 lb. sacks are also extensively used, but 450,000 200 lb. sacks are required for this size, which mostly go to starch manufacturers.

Add to Potato requirements those used in various other ways, including nearly two million superphosphate bags, and the Aroostook county mills turn out nearly 18 million sacks every year.

INTRODUCTION.

"Briggs," said the owner of the car, "I found this long blonde hair on the back seat of my car. My wife's hair is dark."

"Yes, sir," stammered the chaffeur. "I can give you an explanation, sir."

"Explanation nothing!" was the retort. "What I want is an introduction!"

Cabbage Moth Control with Non-poisonous Dusting Materials.

A COMPREHENSIVE experiment was recently conducted at Dundas, near Sydney, to test the efficacy of the non-poisonous Derris Dusts.

Approximately 3,000 Cabbages were dusted at the commercial gardens of Mr. F. Smalley, of Dundas. Fifty per cent. lead arsenate dust was used on portion of the patch as a comparison, and 56 cabbages in the centre of the plot were left entirely undusted during the experiment, as controls.

The 56 control Cabbages which were undusted during the series were infested with both grub and aphis. It was noted that the Drymac dusted Cabbages were practically free from aphis, while those dusted with lead arsenate, although reasonably clean as regards grub, were heavily infested with aphis.

General view of Cabbage patch at second dusting. (22-4-36.)

The Cabbages were planted on March 17, and all received a light dusting of lead arsenate on April 1. As soon as the Cabbages were properly growing, Derris Dusting commenced, the first being given on April 16. Six dusts were then applied during the season, the last on May 28.

During the course of the experiment the plot was inspected by officials of the Department of Agriculture and at the conclusion of the dustings they were again inspected by an officer of the Department, who classed the various rows. An actual count of the 3,000 Cabbages was then made, and any Cabbage showing the slightest sign of grub hole were judged to be infested. This was necessarily a severe basis, as practically all the rejected Cabbages were fit to be marketed as "A" class.

The actual percentage of clean Cabbages on the Derris Dust plot was 89.9 per cent., and on the lead arsenate patch 80 per cent. "Cooper's Drymac," which is known as a standardised Derris Dust, was used throughout the trials.

It was found that an average of 3 pounds of Drymac was used per 100 plants, and as this product is obtainable on the market at approximately 10d. per lb., it will be seen that complete cost of grub control was less than 3½d. per dozen for the season.

Details of this most interesting trial are available on request by any interested persons.

MARKETING HOURS.

A committee has been appointed by the Victorian Market Gardeners' and Fruitgrowers' Association to consider proposed amendments to the hours of marketing at the Victoria Markets. The Committee consists of Councillor E. A. Le Page, Messrs. G. Ryan, H. V. Barnett, T. R. Marriot, and the Secretary, Cr. C. C. A. George. This committee will draft amendments to be submitted to the authorities at an early date.

Control Cabbage and clean mature Cabbage. (Photographed 9-6-36.)

FRUIT CROPS IN U.S.A.

1936 Apple Crop Lowest Since 1921 — Peaches Heavy in California — Pears Below Average, but Higher than 1935.

Apples.

The June 1 condition of Apples, Peaches and Pears, released by the Crop reporting Board of the U.S. Department of Agriculture is as follows:—Apples, 46.7 per cent., of normal, compared with a condition of 71.3 per cent. on June 1, 1935, and with the 10-year (1923-32) average of 67.8 per cent. This is the lowest June 1 condition since 1921. Although too early to forecast production, indications point to one of the smallest crops in recent years—attributed to low temperatures last Winter and Spring.

On the Pacific Coast prospects are below average except in California. There was abundant bloom in the Pacific North-West (Oregon and Washington), but the set of fruit was only fair. The below average condition of the crop is attributed to severe freezes of last Autumn and Winter, and the rainy weather during blossoming.

Peaches.

The total U.S.A. crop is forecast at 40,615,000 bushels, which compares with the 1935 crop of 52,808,000 bushels, and the five-year average (1928-32) of 56,451,000 bushels. In California the indicated production of both Clingstone and Freestone varieties is below the five-year (1928-32) average, but larger than in 1935. The June 1 report indicates that nearly 48 per cent. of total 1936 Peach crop of U.S.A. will be produced in California, compared with 34 per cent. in 1935 and with the usual production of 42 per cent.

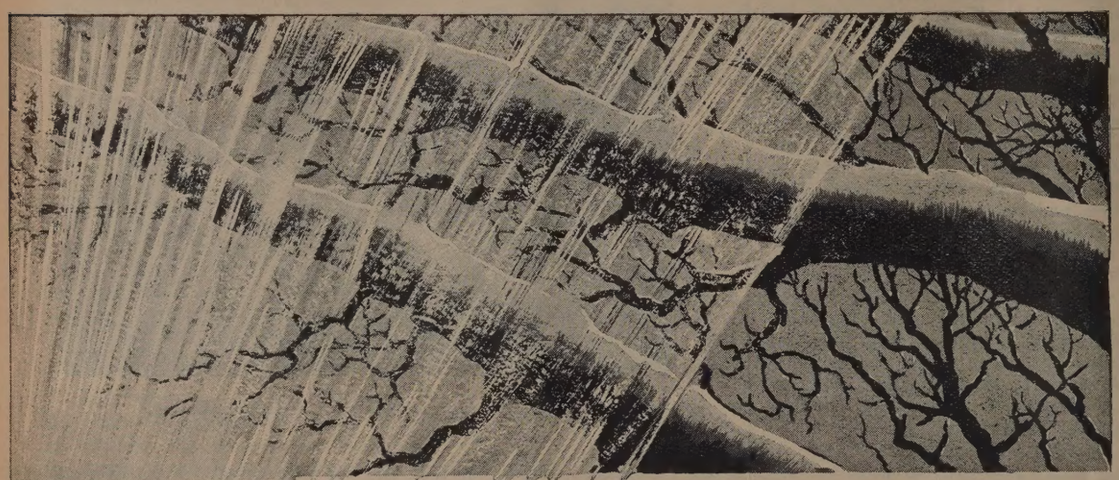
Pears.

The June 1 condition of the 1936 crop was reported at 57.8 per cent., compared with 60.1 per cent. on June 1, 1935, and with a ten-year (1923-32) average of 65.1. Indications on June 1 were for a production of 22,544,000 bushels, which is 2 per cent. above the 1935 crop of 22,035,000 bushels, but is 3 per cent. below the five-year (1928-32) average production of 23,146,000 bushels. In some States frost killed the buds.

In the Pacific North-West, Pears escaped Winter and Spring freezes with relatively light injury, and indications are for a production slightly below the record crop of last season.

Prospects in California, while below average, point to a much larger production than the short crop of 1935.

Hawaii produces 500 cases of Pineapples per acre; Queensland, 200 cases per acre—less than half. The Director of Fruit Culture, Brisbane (Mr. H. Barnes) recommends planting 8,000 to 12,000 plants to the acre (as in Hawaii), instead of 5,000 to 8,000 plants per acre (as now practised in Queensland).



I.C.I. Winter Wash

Soaking ... penetrating ... KILLING ... I.C.I. WINTER WASH destroys Green Peach and Cherry Aphids, Apple Capsid bugs, etc. in the egg stage, leaving the tree free of these pests for the spring growth.

The tar-oil used in I.C.I. WINTER WASH is guaranteed to be of the best high boiling neutral quality, and is converted into a **creamy emulsion. It is not black in colour,** and does not discolour the fruit. It is emulsified by a patent process which renders the emulsion stable even in the hardest water, and at the same time ensures an even distribution of oil over the trees in the form of a film which is resistant to adverse weather conditions.

An illustrated folder, fully explaining the use of I.C.I. WINTER WASH will be gladly sent free, and post free to any address in the Commonwealth.

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McDERMOTT AND SHEEDY
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GARDNER'S SUPPLY STORES CO-OPERATIVE SOCIETY PTY. LTD.
New Market, Grenville Street, Adelaide.

IMPERIAL CHEMICAL INDUSTRIES OF AUST. & N.Z. LTD.,
380 Collins St., Melbourne; 251 George St., Sydney.

THRIPS PLAGUE. UNLIKELY.

Autumn Unfavorable for Their Development.

One of the outstanding results from the efforts of the Thrips Investigation League was the discovery by scientists of the method of forecasting the presence or absence of thrips, months ahead.

Dr. James Davidson, Head of the Department of Entomology, Waite Research Institute, Adelaide, who was in charge of thrips investigation, writes under date July 30, supplying charts showing the thrips population to date. "Orchardists should keep watch on the number of thrips present in flowers about the orchard or garden in early Spring. The numbers present in the 'first Spring rise' is a useful guide to the chances of a thrips infestation developing should the weather be favorable."

He concludes by stating:

"The weather in South Australia and Victoria during the Autumn of 1936, has not favored increase in the numbers of thrips; this is shown by the extent of the Autumn rise. The insects cannot multiply to serious pest numbers by the Apple blossom period (October) unless we have a very favorable, early and sustained warm Spring. On the evidence of the past four years' records it is unlikely that an early Spring plague will develop; but with an early and sustained warm Spring thrips could develop in sufficient numbers to be troublesome during early Summer."

:: :: ::

The other aspect of work of the scientists under the auspices of the Thrips Investigation League has been the development of a programme for fighting a thrips plague when that dire event happens. This aspect is still further investigated in order to provide growers with the best advice possible at the danger period.

OBITUARY.

Members of the fruit industry in Victoria will learn with deep regret of the death, as the result of a motor accident on August 1, of Mr. W. H. Begley, senior clerk of the horticultural division of the Department of Agriculture.

Mr. Begley was educated at Wesley College and left school to join the Department in 1919, and since that time, particularly during the last three or four years, has been in close touch with those engaged in fruit export, being in charge of the clerical staff associated with this work.

His genial personality and untiring efforts, frequently in his own time after office hours, made him a very popular figure, and his loss will be deeply felt.

The industry will desire to join Mr. Begley's colleagues in the Department in extending to Mrs. Begley and her two little daughters, deep sympathy in their sad bereavement.

Apple and Pear Grading Regulations

FOR NEW SOUTH WALES and VICTORIA

Advertising to Increase Fruit Consumption

INTERSTATE CONFERENCE AT SYDNEY, JULY 9 AND 10, 1936.

AN INTERSTATE CONFERENCE under the auspices of the Australian Apple and Pear Export Council was held at the rooms of the Fruit Growers' Federation of New South Wales, Sydney, on July 9 and 10, 1936.

There were present Messrs. A. E. Herring, C. Buchele, E. Ray, C. G. Savage, H. Broadfoot, E. E. Herrod, D. D. Atkins, J. N. MacKenzie, L. J. Jenkins, from New South Wales.

Messrs. C. O. Smith, L. S. Taylor, J. R. Abel, T. G. Thompson, H. McKay from Tasmania.

Messrs. J. M. Ward, F. Moore, W. P. Hutchinson, R. E. Boardman (Secretary) from Victoria, and H. St. John Pratt, Queensland.

Mr. A. E. Herring was elected Chairman. The Chairman stated the conference had been convened following the meetings at Hobart and Melbourne, to decide on grading regulations for interstate Apples and Pears.

Mr. C. O. Smith said that since the Melbourne Conference in January, Tasmania has gazetted regulations for that State.

Voting.—It was decided that the basis of voting be three votes for each State.

Pears.

It was decided to first discuss the proposed grading regulations for Pears. Mr. Moore said that reference to Russet on Pears had been deleted from the export grading regulations. The subject had been debated at the Conference of the Cool Stores Association recently at Shepparton, when a resolution in favor of defining the extent of Russet had then been negatived. The problem had to be faced both as regards interstate trade and export. The export regulations would be dealt with at the forthcoming Adelaide Conference of the Apple and Pear Export Council.

Mr. Ray moved that the regulations as drafted by the Fruitgrowers' Federation of N.S.W. be adopted as follows:—

Pears, "Extra Fancy."—Pears described as extra fancy shall consist of sound, clean, well-formed Pears of one size and one variety, free from broken skins and from disease. Russetting shall not be deemed a blemish on Pears normally russetted, provided that normally clean-skinned varieties shall not be russetted over a greater area than 15 per cent. None of the Pears shall be less than 2¼ inches in diameter.

The Chairman, in reply to a question stated that the provision for human error (10 per cent.) was included in a footnote, and was intended to apply to other grades as well. The placing of this as an addendum was to remove it from the main body of grade description so that growers would not seek to include the 10 per cent. as a right.

Tasmanian delegates were of the opinion that the grade was not sufficiently high, and would vote against its adoption. Mr. Ray agreed on request to include the provisions for tolerance in the body of the grade description and not as a footnote, and in this form the resolution was carried, Tasmania voting against it.

When the other grades were introduced for discussion and adoption, Tasmanian delegates indicated that they recognised the right of N.S.W. and Victoria to fix the standards on which fruit could be sold in those States. Their objective, however, was to raise standards wherever possible. Details of the proposed grades were then considered.

With regard to Hail Marks, Mr. Ray pointed out hail was now capable of being covered by insurance under certain conditions. Provision should be made for the selling of fruit slightly marked by hail, otherwise the insurance companies would raise their rates.

Conference agreed with the inclusion of hail-marked fruit where such had been slightly "peppered" by hail, and where the hail marks had grown over, provided that the fruit was not seriously dented with corkiness under the skin.

Grades for Pears were decided upon as per schedule herewith.

A committee, consisting of Messrs. Herring, Moore and Broadfoot was apointed to draw up a list of varieties, dealing with the subject of russet.

Apples.

"Extra Fancy" and "Fancy".—N.S.W. proposed that the provisions for tolerance be included as a footnote. It was decided after discussion to include this provision in the grade description for local marketing, as for export, provided that there be no limit as to the maximum size, color requirements to be defined, and extra varieties to be included.

It was decided on the motion of Messrs. Ray and Hutchinson that the tolerance of blemishes should apply to Extra Fancy and Fancy only, as per export standard, and that with other grades the descriptions are set forth with no additional tolerance.

Counts Instead of Sizes.

Mr. Taylor expressed the opinion that it would be better for all concerned if counts were used instead of sizes.

Mr. Hutchinson supported.

Mr. Jenkins said that buyers, including the numerous element of foreign buyers on Sydney markets, preferred the count to the size. At present there were frequent instances where cases packed to size were insufficiently filled, which had repercussions after the sale had been made. In further discussion it was stated that some overseas buyers were now asking for sizes intead of count, the reason being given that the counts were not accurate.

Mr. Taylor moved:—

"That it be a recommendation for all States to adopt the count instead of size in packing fruit."

Mr. Hutchinson seconded. Carried.

The subject of re-working was mentioned, it being stated that varieties were being rapidly changed over in Tasmania and N.S.W.

During all the debates information of a practical nature was given by Mr. J. R. Abel.

Friday, July 10.

The sub-committee to deal with Pear varieties met at the rooms of the Fruitgrowers' Federation of New South Wales on July 10, at 9 a.m. There were present Messrs. A. E. Herring (Chairman), F. Moore, H. Broadfoot, and the Secretary.

It was decided that for the purposes of the regulations the simplest method would be to define "normally clean skinned varieties." After discussion it was decided that the following nine varieties be recommended for this description to the conference.

Packham's Triumph, Josephine, Williams B.C., Howell, Clapps Favorite, Packham's Late, B. D'Anjou, Doyenne du Comice, Glou Morceau.

Conference reassembled at 10 a.m. All delegates present. Mr. P. S. Macdermott attended in place of Mr. L. Jenkins.

The Chairman presented the report of the sub-committee recommending nine varieties of Pears as normally clean skinned. After discussion it was decided by conference to delete Glou Morceau.

Mr. Moore moved that the eight varieties as listed be described as normally clean skinned and be permitted to carry the percentage of Russet as set out in the draft regulations, and with no russett restrictions on the other varieties. Carried.

Apple Advertising.

The Chairman stated that at the Hobart Conference he expressed the view that the Fruitgrowers' Federation of N.S.W. would contribute £300 towards an Apple advertising fund, and Mr. Blick had advanced the suggestion that the wholesale fruit agents would contribute. His personal views were that the funds should be provided by the growers.

Mr. Hutchinson said Victoria was considering a proposal for raising funds by a levy. Very large quantities of fruit were sold in the Victoria Markets: it might be possible for provision to be made for a grower to declare his load and pay the fee decided upon.

Mr. Ward stated that Goulburn Valley growers collected their levies through canning factories on a per tonnage basis. The question of a stamp tax had been discussed by other sections of growers, but constitutional difficulties came in; it was a Federal matter.

Mr. Moore said that even if this were a Federal matter it could be considered as such, as substantial funds would be needed to do the advertising effectively. The position had to be faced. We were seeking to develop a geographically difficult market—the United Kingdom—which appeared to be gradually slipping away from us. England had developed gas storage, and now Argentine was an increasing factor in Apples supplied to U.K. To hold the market for Australia, tariff barriers had to be raised and a change of Government could knock that prop away. If we were to put the same energy into developing the Australian market as had been put into developing export, better results might have been achieved; our home markets were best, the tragedy of the matter was that we were feeding the markets here with reject fruit. A national policy of advertising was needed, with effective policing of the regulations. Money spent in advertising would be wasted unless we were going to honor the goods to the public.

The sum of ½d. per case was now being paid as inspection fee on fruit entering N.S.W., but the inspection was inadequate, growers in some States—including Victoria — were sending rubbish and "getting away with it." He would recommend that any contributions made by Victoria for advertising would be retrospective in accordance with the contributions from other States.

Mr. Taylor said that the two main markets for fruit—overseas and Sydney—had proved unstable. An educational advertising campaign would increase the consumption of fruit.

Mr. Smith stated he could not commit Tasmania to a contribution to the advertising funds, especially on the grading regulations as decided by the present conference. The grade included as "domestic" included rubbish. He did not favor a Federal excise stamp fee to raise funds. In a normal season Tasmania would send only "Extra Fancy" and "Fancy" fruit to Sydney. Tasmania might more favorably consider a plan for advertising "Tasmanian" Apples in N.S.W.

Mr. Atkins stated that from July, 1934, to June, 1935, there were 1,105,330 cases of Apples and Pears from Tasmania landed in Sydney. Mr. Broadfoot said that in round figures the production figures for New South Wales were, Apples 1½ million

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The Tie That Binds

bushels, and Pears three quarters of a million.

Mr. Savage stated that the consumption of Apples in U.S.A. was 62 lb. per head per annum, as compared with 32 lb. in N.S.W. Prior to the intensive citrus advertising, the consumption of Apples had been 72 lb. per head, and citrus 29 lb., but the citrus advertising campaign had made the figures, 42 lb. citrus and 62 lb. Apples; the total consumption of fruit had increased from 185 lb. to 190 lb. per head.

Mr. Herrod advocated a general educational advertising campaign designed to increase the consumption of fruit generally, leaving the public to make their selection of the kind and quality of fruit offering. At present a "Tea" advertising campaign was in progress, but no grades were mentioned, the principle being that, in increasing the consumption of tea, the public would make their own selection of brand and quality. Advertised proprietary lines of food, peanut butter, etc., had cut into the money which the housewife had to spend, and it was necessary to create a fruit conscience. The consumption of fruit in Australia had by no means reached saturation point.

Mr. Hutchinson said he felt sure that the grades of Apples sent from Victoria to Sydney would be "fancy" and "good."

The Secretary stated official figures just released regarding the milk advertising campaign in Melbourne, revealing an increase in consumption of 12½ per cent. The co-operation of the medical and dental professions, also the Education Department, was assured for any constructive educational policy to increase fruit consumption. By the new method of production of pure fruit drinks, much of the lower grade fruit could be kept off the markets.

Mr. Macdermott said that the consumption of fruit in New South Wales was steadily declining. This drift could be arrested by an advertising campaign. The N.S.W. Chamber of Fruit and Vegetable Industries could make a contribution of value in providing office accommodation for the Advertising Officer and his staff.

The Chairman expressed the view that the suggestion from Mr. Smith for advertising specifically "Tasmanian Apples was liable to have repercussions which could easily react to the detriment of Tasmania, seeing that people in N.S.W. would naturally prefer to buy the products of their own State. He felt that any advertising must be national in character. He suggested that this subject be deferred for further discussion at the forthcoming Apple and Pear Export Council Conference in Adelaide.

Mr. Smith said the discussions on this matter would be reported to the Tasmanian State Fruit Board. He agreed that the subject could be deferred till the Adelaide Conference.

Enforcing the Grades.

On Mr. Moore's motion it was decided that it be a recommendation to the State Departments of Agriculture that the Grade Standards for Apples and Pears be rigidly enforced in all centres.

Fruit Barrows.

Mr. C. O. Smith moved:—

That this Conference urges the retention of barrows for the sale of fruit in Sydney streets.

Interstate Trade.

The Secretary reported that a conference had been held at Sydney on July 8 at the rooms of the N.S.W. Chamber of Fruit and Vegetable Industries. It had been decided to recommend to the State and Interstate Fruit Associations that a consultative committee be set up to improve marketing in Sydney, and among other things to collate crop and fruit movement statistics to prevent "blind" marketing in Sydney.

Mr. Macdermott stated that among the objectives of the consultative committee were the placing of the present Sydney Municipal Markets under a Trust or Commission—quite apart from the Sydney City Council; also the reduction and licensing of agents, the collection of crop statistics, and to review other regulations. Hearty votes of thanks were carried to the Chairman, Mr. Herring, the Fruitgrowers' Federation of New South Wales, and its Secretary, Col. Herrod.

The conference then closed.

The following grade descriptions were decided upon:—

Apples.

"Extra Fancy."

Apples described as "Extra Fancy" shall consist of sound, clean, well-formed mature Apples of one size and one variety, free from broken skins and from disease. Slight blemishes may be permitted, provided such blemishes do not exceed 10 per cent. by number of the total fruit in any case, and provided that the total area covered by such blemishes on any Apple do not exceed the area contained in a circle having a diameter of ¼ of an inch.

Russetting shall not be considered a blemish, provided that not more than 10 per cent, of the surface of any Apple is affected.

The minimum sizes and color requirements shall be as set out in the schedule herewith, but with no limit as to maximum sizes.

"Fancy."

Apples described as "Fancy" shall consist of sound, clean and fairly well formed mature Apples of one size and one variety, free from broken skins and from disease.

Slight blemishes from any cause may be permitted provided such blemishes do not exceed 10 per cent. by number of the total fruit in any case, and provided that the total area covered by such blemishes on any Apple do not exceed the area contained in a circle having a diameter of ¼ of an inch.

Russetting shall not be considered a blemish provided that not more than 30 per cent. of the surface of any Apple is affected. Provided that in regard to the Sturmer variety not more than 50 per cent. of any Apple may be russetted.

The minimum sizes and color requirements shall be as set out in the schedule herewith, with no limit as to maximum sizes.

"Good."

Apples described as "Good" shall consist of Apples of one size and one variety, free from broken skins, and not seriously blemished or injured by any disease, but fruit slightly blemished by Black Spot fungus, caterpillars, hail marks or limb rubs may be permitted, provided that the total area covered by such blemishes on any Apple do not exceed the area contained in a circle having a diameter of ¼ of an inch; provided further that where the blemishes are wholly restricted to superficial hail marks the blemishes on any one Apple do not exceed the area contained in a circle having a diameter of one half an inch.

Russetting shall not be deemed to be a blemish with the Sturmer variety, but with other varieties the russetting

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There are 9 ways in which the FORDSON will save Time and Money in Your Orchard:

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must not be more than 50 per cent.

The minimum sizes shall be as set out in the schedule herewith, with no limit as to maximum sizes.

Apples.

"Domestic."

Apples described as "Domestic" shall consist of Apples of one size and one variety, free from broken skins and serious damage caused by insects, disease or otherwise, but may include blemished fruit, provided that the total area of any blemishes on any one fruit shall not exceed the area of a circle having a diameter of ¾ of an inch, provided further that where the blemishes are wholly restricted to superficial hail marks the blemishes on any Apple do not exceed the area contained in a circle having a diameter of 1½ inches.

The minimum sizes shall be as set out in the schedule herewith, with no limit as to maximum sizes.

Pears.

"Extra Fancy."

Pears described as "Extra Fancy" shall consist of sound, clean, well-formed Pears of one size and one variety, free from any broken skins and from disease. Russetting shall not be deemed a blemish on Pears normally russetted, providing that normally clean skinned varieties shall not be russetted over a greater area than 15 per cent. of the surface of any one Pear.

Superficial blemishes from any cause may be permitted provided such blemishes do not exceed 10 per cent. by number of the total fruit in any case, and provided that the total area covered by such blemishes on any Pear do not exceed the area contained in a circle having a diameter of ¼ of an inch.

None of the Pears in this grade shall be less than 2¼ in. in diameter.

"Fancy."

Pears described as "Fancy" shall consist of sound clean, well-formed Pears of one size and one variety, free from broken skins, and not seriously blemished or injured by any disease. Pears slightly blemished by Black Spot fungus, or from other causes, may be permitted, provided that the total area covered by such blemishes on any Pear do not exceed the area contained in a circle having a diameter of ¾ of an inch, provided further that where the blemishes are wholly restricted to superficial hail marks, the blemishes on any one Pear do not exceed the area contained in a circle having a diameter of 1½ inches.

Russetting shall not be deemed a blemish.

None of the Pears in this grade shall be less than 2 in. in diameter.

"Good."

Pears described as "Good" shall consist of Pears of one size and one variety, free from broken skins and not seriously blemished or injured by any disease, but Pears slightly blemished by Black Spot fungus, or from other causes, may be permitted, provided that the total area covered by such blemishes on any Pear does not exceed the area contained in a circle having a diameter of ½ an inch; provided further that where the blemishes are wholly restricted to superficial hail marks, the blemishes on any Pear do not exceed the area contained in a circle having a diameter of one inch.

Russetting shall not be considered a blemish.

None of the Pears in this grade shall be less than 2 in. in diameter.

"Domestic."

Pears described as "Domestic" shall consist of Pears of one size and one variety, free from broken skins, and not seriously blemished or injured by any disease, but Pears slightly blemished by Black Spot fungus, or from other causes, may be permitted, provided that the total area covered by such blemishes on any Pear do not exceed the area contained in a circle having a diameter of ¾ of an inch, provided further that where the blemishes are wholly restricted to superficial hail marks, the blemishes on any one Pear do not exceed the area contained in a circle having a diameter of 1½ inches.

Russetting shall not be deemed a blemish.

None of the Pears in this grade shall be less than 2 in. in diameter.

Normally Clean Skinned Pears.

The following were decided upon for classification in the regulations normally clean-skinned Pears:—

Packham's Triumph, Josephine de Malines, Williams Bon Chretien (Duchess or Bartlett), Howell, Doyenne du Comice, Beurre D'Anjou, Packham's Late, Clapps Favorite.

Definition of Size.

The size of the Apples and Pears shall be as follows:—

"2 inches," which term shall include fruit 2 inches or greater diameter, but less than 2⅛ inches.

"2⅛ inches," which term shall include fruit 2⅛ inches or greater diameter, but less than 2¼.

"2¼ inches," which term shall include fruit 2¼ inches or greater diameter, but less than 2⅜ inches.

"2⅜ inches," which term shall include fruit 2⅜ inches of greater diameter, but less than 2½ inches.

"2½ inches," which term shall include fruit 2½ inches or greater diameter, but less than 2⅝ inches.

"2⅝ inches," which term shall include fruit 2⅝ inches or greater diameter, but less than 3 inches.

"3 inches," which term shall include fruit 3 inches or greater diameter, but less than 3¼ inches.

"3¼ inches," which term shall include fruit 3¼ inches or greate diameter, but less than 3½ inches.

Variety	Abbreviated Description (if any)	Minimum Sizes. (Inches in Diameter.)	Percentage of color Characteristic of the Variety Necessary of Each Apple in Each Grade. Extra Fancy	Fancy
Aiken Seedling	A.S.	2¼	—	—
Adams Pearmain	A. PM.	2¼	30	10
Alexander	ALX.	2¼	30	10
Alfriston	ALF.	2¼	—	—
Allsopps	ALLSOP	2¼	—	—
Aromatic	ARO.	2¼	50	20
Australian Beauty	A.B.	2¼	50	20
Ben Davis	BEN. D.	2¼	30	15
Buncombe	BUN.	2¼	50	20
Charles Ross	C.R.	2¼	30	10
Cleopatra	CLEO.	2¼	—	—
Coleman	CMN.	2¼	50	20
Commerce	COM.	2¼	50	20
Cox's Orange Pippin	C.O.P.	2	30	5
Crofton	CROF.	2	50	20
Crow Egg	C.E.	2¼	30	10
Delicious	DEL.	2¼	50	20
Democrat	DEM.	2¼	70	35
Dougherty	DHTY.	2⅜	40	20
Duke of Clarence	D.C.	2¼	70	35
Dunn's	DUNN'S	2¼	—	—
Edna May	E.M.	2¼	50	20
Elsie Grant	E.G.	2⅜	40	20
French Crab	F.C.	2¼	70 green color	——
Foster	FOS.	2¼	50	20
Geeveston Fanny	G.F.	2⅜	50	10
Golden Delicious	G.D.	2¼	—	—
Granny Smith	G.S.	2¼	—	—
Gravenstein	GRAV.	2¼	—	—
Grimes Golden	G.G.	2¼	—	—
Hoover	HOOV.	2¼	50	30
Huon Belle	H.B.	2¼	30	15
Irish Peach	I.P.	2¼	20	10
Jonathan	Jon.	2⅜	50	20
Jubilee	JUB.	2¼	50	20
King Cole	K. Cole.	2¼	50	20
King David	K.D.	2⅜	70	35
King Pippin	K.P.	2⅜	30	10
Kirks Carrington	K. CAR.	2⅜	50	20
London Pippin	L.P.	2¼	—	—
Lord Nelson	L.N.	2¼	—	—
Lord Suffield	L.SF.	2¼	—	—
Lord Wolseley	L.W.	2¼	—	—
McIntosh Red	Mc. R.	2¼	70	35
Mammoth	MAM	2¼	—	—
Mobb's Codlin	M.C.	2¼	—	—
Newtown Pippin	NT. P.	2¼	—	—
Nickajack	NJ.	2¼	30	10
Northern Spy	N.S.	2¼	30	10
Perfection	PERFN.	2¼	50	20
Prince Alfred	P.A.	2¼	30	10
Pomme de Neige	P.D.N.	2⅜	30	10
Ranelagh	RAN.	2¼	30	10
Reinette du Canada	R.D.C.	2¼	—	—
Red Carrington	R. CAR.	2⅜	40	10
Ribston Pippin	R.P.	2¼	—	—
Rokewood	ROKE.	2¼	40	20
Rome Beauty	R.B.	2¼	30	10
Rymer	RYM.	2¼	25	10
Senator	SEN.	2¼	30	10
Strawberry Pippin	STRAW.	2¼	30	10
Spitzenburg	SPTZ.	2¼	40	15
Scarlet	S. PM.	2⅜	50	20
Schroeder	SCH.	2¼	—	—
Statesman	STN.	2¼	30	10
Stayman's Winesap	STAY. W.	2¼	30	10
Stone Pippin	S.P.	2¼	—	—
Sturmer	ST. P.	2¼	—	—
Stewarts (Ballarat)	BLT.	2⅜	—	—
Tasman's Pride	T.P.	2⅜	50	20
Twenty Ounce	T.O.	2¼	—	—
Wellington	WELL.	2¼	—	—
White Winter Pearmain	W.W.P.	2¼	—	—
Willie Sharpe	W.S.	2¼	—	—
Winter Majetin	W.M.	2¼	20	10
Worcester Pearmain	W. PM.	2⅜	50	20
Yates	YATES	2	50	20
Unclassified	name of apple	2¼	—	—

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Frost Protection Methods

Tests with Oil Burners and Briquettes

Results of Preliminary Trials

(By A. V. Lyon, M.Ag.Sc., Merbein Experiment Station.)

SPRING FROSTS in vineyards have caused severe loss in those Murray Valley irrigation districts which produce Grapes for drying purposes.

"Smoke pot," or "smudge pots" as formerly used, have not given satisfaction, and the Australian Dried Fruits Association instituted an inquiry into the effectiveness and costs of two methods of direct heating. The tests were accordingly carried out on a Merbein vineyard by the Commonwealth Research Station, in conjunction with a local committee appointed by the A.D.F.A. The two fuels used were fuel oil, in bucket heaters, each holding one gallon of oil; and briquettes, in a "protector" briquette heater devised in Australia, each of which holds 15 lbs. of briquettes.

Lighting was carried out by torches, the actual ignition in the case of the oil being obtained by lighting, with a wax taper, a piece of waste dipped into the oil; and in the case of the briquettes by lighting a special kindler, on to which a small quantity of kerosene was poured, from a torch.

A suitable site, on which frosts occur regularly, was selected in the Merbein district. Two areas of three acres each were selected, and on each of these areas

60 heaters per acre,

filled with briquettes and oil respectively, were regularly spaced.

Twelve thermometers, attached to a wire at 3 ft. on the vine trellis, were placed at regular intervals in each plot, and midway between burners, to give minimum temperatures. The plots were three chains apart. Check thermometers for recording outside temperatures were placed in straight lines radiating outwards at one chain intervals from all sides of both the square areas in which the burners were placed.

Oil Burners and Briquettes.

Suitable temperatures for the trials occurred on June 17, 1936, and again on June 19. On June 17 the oil burners were lighted between 10.15 and 10.45 p.m., and the briquettes between 10.15 and 11 p.m., two operators being employed in each case. The oil burners had dampers, covering about one-half of the opening throughout. Both openings in the briquette burners were left uncovered.

The temperatures were read every 30 minutes by four operators, who completed the reading in seven minutes. One additional thermometer, suspended 25 feet above the ground midway between the heated plots, was also read on each occasion.

The trial was repeated on June 19, using 40 oil burners on the site on which the briquette burners were placed on the previous occasion, and 60 briquette burners on the site on which the oil burners had been used. The oil burners were reduced because examination of the results of the previous trial showed a greater temperature rise given by oil than by briquettes.

Tabulation of Results.

The results are plotted in four figures:—

(1) The mean of all temperature readings on heated and unheated areas at 30-minute intervals for June 17 and 18, together with the mean of the controls at the north and south end respectively.

(2) A similar expression for June 19 and 20.

(3) The temperatures in a line across the centre of both plots at 12.20 p.m. and at 1.20 a.m. for the first trial. (Each point on the heated plot is the mean of four readings.)

(4) A similar expression at the same times for the second trial.

(Note.—The data for figures 3 and 4 were selected, after examination of all readings, as showing the maximum temperatures secured on each plot.)

Conclusion.

(1) The maximum rises above controls recorded were 5.25 deg. F. for oil and 4.25 deg. F. for briquettes (60 heaters per acre in each case).

(2) The oil heaters reached their maximum in 1½ hours after lighting commenced. The briquette burners gave their maximum 2½ hours after lighting.

(3) The results in the case of briquettes were similar in all respects in both trials.

(4) A reduction to 40 oil burners resulted in a maximum rise of 3.25 deg. F., which again occurred 1½ hours after lighting up.

(5) In the case of briquettes, heating is very slow during the first hour, with the maximum rise during the second hour. The temperature in the plots heated with oil began to rise immediately.

(6) During both trials the temperature at 25 ft. above the ground was approximately 5 degrees higher than the control temperatures at 3 ft.

(7) The smoke clouds from about the 15 ft. to 35 ft. level above ground commenced to form above the oil heaters soon after lighting up. The smoke cloud and also the lighting effect was more evident over the oil-heated plot, practically no such effects occurring over the briquette plot.

Relative Costs.

The equipment for distribution of the material used in the trials was not specially devised for this purpose. This fact, and the inexperience of the workmen employed, make the calculation of labor and distribution costs of little value. Costings are, therefore, limited to materials, which at present are as follows:—

Briquettes. — The "Protector" briquette burners cost 5/6 each, or £16/10/- for the 60 burners used per acre. The briquettes are at present £1 per ton at Yallourn, plus 18/9 per ton freight to Mildura. The cost of the fuel is approximately 16/- per acre for one burning.

Fuel Oil.—The oil pots were obtained for 2/- each, or £6 per acre when 60 burners were used. The present price of fuel oil at Mildura is 8½d. per gallon.

Notes and Comments.

Both trials were carried out in the winter, on nights when frost conditions extended continuously for many miles, and commenced at an early hour (10 p.m.). The results may not be comparable with those which prevail in the spring-time, when the majority of frosts are limited to definite hollows and shorter periods.

A

study of the temperature

curves throughout the night showed that the oil burners resulted in an immediate and regular rise in temperatures. The rise during the first half-hour was approximately 1½ deg. F., and this rate of rise continued regularly until a rise of 4½ deg. F. was reached in 1½ hours.

During the next hour the rise in temperature was slightly increased, 5 deg. rise being recorded 2½ hours after lighting commenced. Thereafter, the rise in temperature receded steadily until observations ceased seven hours after lighting. At this time the temperature of the heated plot was 1 deg. F. higher than the untreated control. The higher temperature in comparison with the control is attributed to smoke effects.

The temperature on the area heated by briquettes rose less rapidly than those of the area heated by burning fuel oil. There was also a slight lag (approximately half an hour) before any appreciable rise in temperature was noted. The maximum temperatures were recorded during the third and fourth hours after lighting, after which temperatures fell rapidly, being similar to the unheated control in approximately five hours after lighting was completed.

Note.—The foregoing are viewed as preliminary results only, pending further trials if suitable conditions prevail in the spring-time. It is considered that observations of the effects on young vine shoots and results under conditions of a spring frost may yield additional information.

ARE YOU GRUBBING?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features, with a host of others, was THE "MONKEY" GRUBBER.

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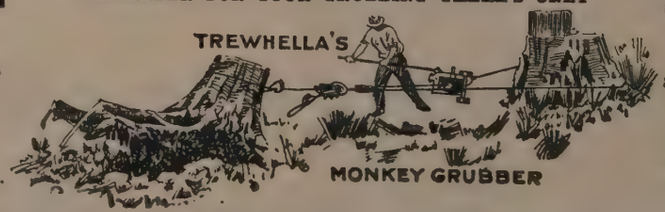

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Marketing Dried Fruits

Privy Council Decision Makes Many Marketing Acts Invalid

JUDGMENT FOR F. A. JAMES WITH COSTS AGAINST THE COMMONWEALTH.

DIFFICULTIES IN THE WAY OF ALTERING THE CONSTITUTION.

Producers Now Seeking Means for Having Their Majority Desires Enforced.

THE DECISION of the Judicial Committee of the Privy Council in upholding the appeal of Mr. F. A. James against the validity of the Commonwealth Dried Fruits Act, 1928-35, is of major importance.

Not only are dried fruits affected, but all other marketing boards dealing with interstate and export trade.

Federal and State Acts have been passed in the belief that the Commonwealth was not bound by the provisions of Section 92 of the Constitution.

The Privy Council has decided that the Commonwealth is bound by Section 92, which reads as follows:—

On the imposition of uniform duties of customs, trade, commerce, and intercourse amongst States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

The full text of the judgment is a lengthy document, including a discussion as to the meaning of "absolutely free." The heart of the decision is as follows:—

Their Lordships are of opinion that as Section 92 binds the Commonwealth, it seems to follow necessarily that the Dried Fruits Act, 1928-35, must be held to be invalid. On the interpretation of the word "free" in Section 92, the Acts and Regulations either prohibit entirely if there is no licence, or, if a licence is granted, partially prohibit interstate trade. Indeed, the contrary was but faintly contended if the Commonwealth were held to be bound by the Section. In their Lordships' judgment, Section 92 applies to the Commonwealth. That being so, the Dried Fruits Act and its regulations should be declared invalid, as contravening section 92.

The result is that the Commonwealth should be held to have failed in its attempt by the method adopted under the Dried Fruits Act to control prices and establish a marketing system, even though the Government is satisfied that such a policy is in the best interests of the Australian people. Such a result cannot fail to cause regrets, but these inconveniences are likely to flow from a written Constitution.

The Constitution must be continued in accordance with sound principles of interpretation. It was not the functions of their Lordships to rewrite the Constitution. The Constitution, including Section 92, embodied the will of the people, and was alterable only by the will of the people expressed according to Section 128 (providing for a referendum).

The appeal would be allowed, the Commonwealth demurrer over-ruled, and the matter remitted for trial to the High Court. Respondent (Commonwealth) to pay appellant's (F. A. James) costs. Interveners to pay their own costs.

The opinion is general that the Privy Council's Judgment will not affect the dried fruits position for this season, as all arrangements have been made for handling the crop, both in Australia and abroad.

The difficulty is, of course, that for the future there is no provision for compulsory export. Australia consumes about 14 per cent. of the dried fruits produced, leaving 76 per cent. for export.

In order to obtain a license to deal in dried fruits in the protected Australian market it was necessary to establish that the required percentage had been exported. Under the Privy Council's decision these provisions have been annulled.

To alter the Constitution a referendum would be necessary; if there is a reasonable chance of a majority vote favoring the altering of the Constitution this course may be decided upon. The matter is under discussion.

But it is known that there are grave difficulties in the way of securing that affirmative vote. A majority of the States is necessary. It is believed that Tasmania and Western Australia would vote against it, and the result of the vote in South Australia is uncertain.

It is understood that there will be a conference of the States of the Commonwealth to deal with the whole subject of marketing legislation in order to see what laws could be enacted within the framework of the present Constitution.

Under the Closer Settlement, Irrigation, and Repatriation policies of the State and Federal Governments, millions of pounds sterling have been invested, and the livelihood of many thousands of people depends upon the successful marketing of their products. Hence the concern of the Governments, as well as the producers, to bring about an orderly balance as between the quantities for export and for protected local markets.

The producer of dried fruits points out with emphasis that he has as much right to protection and to the "Australian" price as the manufacturer, and that on the question of control, all producers had a vote, and a majority favored the setting up of the present machinery under Acts of Parliament.

There is much activity among the leaders of the primary industries whose marketing schemes are upset by the Privy Council's decision.

The goodwill of the producers is assured in the evolving of plans to bring about the most effective means for stabilising markets.

ADVERTISING DRIED FRUITS.

Publicity Committee Active.

At a meeting of the Dried Fruits Joint Publicity Committee, held in Melbourne on July 3, the Chairman reviewed the many avenues being utilised to increase the Australian consumption of dried fruits. During the year ending April 30 the sum of £4,531 has been expended on advertising in various forms and had stimulated sales during that period.

Including contracts entered into and not yet entirely completed, a brief resume of the publicity approved would include:—Radio broadcasts by six stations; newspaper advertisements in daily and women's papers, and a "Better Cooking Campaign" by courtesy of the Melbourne "Sun News Pictorial;" window displays by 120 retail stores spread over six months from June to December, including a special display by Messrs. R. G. Wilson and Co. immediately after Royal Show Week.

Country Displays.

The opportunity was taken to arrange displays in country districts during special celebrations. In this way the Swan Hill Centenary celebrations provided a chance to make displays in grocers' and bakers' shops, with the co-operation of the merchants.

Shepparton's "Made in Australia Campaign" included a good display of dried fruits in the windows of McLennan's stores. A similar campaign in Bendigo also provided a number of displays, and other country storekeepers have been supplied with advertising material.

The regular display at the Melbourne Royal Show will be staged. This is a valuable advertising medium, and is used to advantage. Recipe books are distributed, and with raisin bread supplied by many bakers, this form of consumption is increasing.

Co-operation has been extended by the Export Control Board, who are distributing advertising material to Canada and New Zealand, at the Board's expense.

N.S.W. DRIED FRUITS BOARD.

At a meeting of the N.S.W. Dried Fruits Board, held in Sydney on July 22, 1936, the all-absorbing question as to the effect on the dried fruits industry of the decision of the Privy Council in James v. Commonwealth was exhaustively considered.

It was abundantly clear that the decision does not in any way affect the provisions of the State Dried Fruits Act or the Constitution of the N.S.W. Dried Fruits Board thereunder. The activities of the Board under the State Act, will therefore uninterruptedly continue as formerly.

The main activities of the Board consist of the recommendation, on the basis of production and consumption, of quotas for purposes of interstate trade, the check of the N.S.W. pack of dried fruits to ensure that the determined quotas are complied with, the registration of packing houses, the inspection of dried fruits to ensure the hygienic treatment thereof, the regulation of the packing and grading of dried fruits, the regulation of the branding of cases containing dried fruits, the prevention of the sale or purchase of dried fruits which have not been packed and graded in a registered packing house and the containers branded in accordance with the regulations made under the Act.

49,000 TONS EXPECTED.

Demand Satisfactory.

According to advices reaching the Commonwealth Dried Fruits Export Control Board, sales of Australian dried fruits in Great Britain for the fortnight ending July 23 comprised 1,862 tons. The average price of 1,475 tons of Sultanas was £41/0/10, while 373 tons of Currants averaged £29/10/7, and 14 tons of Lexias were sold at an average of £42/19/1 per ton. The demand is steady, and the trade have been informed and quite understand that the recent legal decision affects Australian trade conditions but does not impinge on the organised marketing arrangements in Great Britain and Dominions generally. The total shipments of dried fruits from Australia for the current season to July 23 amount to 38,259 tons, shipments to the United Kingdom being 22,540 tons, to Canada 12,497, to New Zealand 2,877, and to other markets 345 tons. Allowing for the domestic requirements of the Commonwealth, it is anticipated that shipments for the season will amount to 49,000 tons. In view of forward bookings to Canada and the further requirements of the Dominions of Canada and New Zealand, it is unlikely that shipments to Great Britain will exceed 28,500 tons. The statistical position of the industry is comparatively strong at the moment, and the outlook as regards prices satisfactory.

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GRADES—Mixed Crystals, Fines, Granulated (Snow), Packed in Suitable Containers for Growers' Requirements.

Agents for All States: ELDER SMITH & COMPANY LIMITED, All Capital Cities.

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The "HOME" Train

Work over for the day, man and maid, young and old are intent upon "getting home." All day they have been concerned with business, mostly someone else's business, for the majority of the homeward-bound travellers are salary or wage earners.

Have they—have you—found time for personal business?

The Commonwealth Savings Bank is open all day in City, Town, Village and Country Post Office, and its convenient services are therefore easily available to all.

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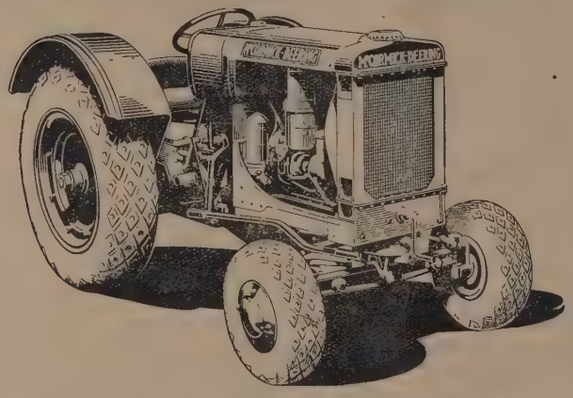

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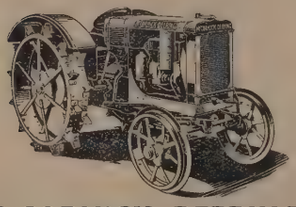

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Write us for full information about this or any other McCormick-Deering tractors, or see your local agent.

For ploughing and cultivating in the narrow orchard spaces, you need a low, short, narrow, compact tractor. Here is the McCormick-Deering O-12 built for the job. It does the work of four horses, requiring only a fraction of the room demanded by a team. O-12 works freely between trees and under low-hanging branches. By means of the power take-off, O-12 operates sprayers and other machines. Its belt-pulley is handy for all kinds of work. Operates on kerosene.

INTERNATIONAL MODEL V TRACTOR DISC HARROWS

Strongly built, exceptionally light in draught, the International Model V tractor disc harrow has a cultivating width of 8 feet and is equipped with fourteen 18-inch discs made of high-quality heat-treated steel. Regularly equipped with a spring swivel hitch to couple the implement close to the tractor.

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Available in 5, 6, 7 and 8-ft. sizes. Gangs and discs work on wide variety of cutting angles. Quick angling device eliminates strain on harrow. Separate adjustments for front and rear gangs assure accurate trailing.

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WESTERN AUSTRALIA.

Over a Million Cases of Fruit Sent to All Ports.

SEVERAL RECORDS were broken this year with regard to fruit exports, according to official advices just to hand from Mr. G. W. Wickens, W.A. Superintendent of Horticulture.

The total quantity exported of all fruits has, for the first time in Western Australia's experience exceeded one million cases.

The total quantity of Apples exported to the United Kingdom, 619,129 cases, is also a record.

Pears show an increase on last year's figures, with 45,785, as against 30,060 for 1935.

Grapes show a decrease this year, with 50,975 cases, as against 57,482 last year.

Orange export still continues to be a very small matter; this year's export being 3,811 and last year 3,523.

The grand total was 1,010,920 cases of fresh fruit in the 1936 export season.

The principal shipments were:—Apples, 909,308; Grapes, 50,975; Pears, 45,785. Shipments to United Kingdom total 662,751, consisting of 619,129 cases of Apples, 38,566 cases of Pears, and 4,053 cases of Grapes. To the Continent, 203,953 cases of fruit was shipped, including 197,124 cases of Apples, 4,435 cases of Pears, and 2,394 cases of Grapes.

Trade with Near East.

Western Australia has a substantial trade with the Near East, the largest shipment being Apples, 84,652; Pears, 2,764; Grapes, 44,518; Oranges, 2,981 and Plums 507 cases. Of the shipments to the East, Singapore received 42,643, consisting of 26,848 cases of Apples, 13,514 of Grapes, 1,355 of Oranges, 421 of Pears, 239 of Plums, 158 of Lemons, 70 of Peaches, 21 of Cherries, 14 of Apricots, together with small quantities of Melons and Passionfruit. Port Said received 39,539, consisting of 38,674 cases of Apples, 100 cases of Pears, and 765 cases of Grapes. Of the 28,795 cases sent to Colombo the principal shipment was that of Grapes, 23,109, with Apples, 4,522 cases, Oranges 667, and Pears 410, with smaller quantities of Peaches, Lemons, and Cherries. Other ports served with fresh fruit from W.A. included Batavia, Sourabaya, Samarang, Bombay, Calcutta, Penang, Aden, etc.

Of the shipments to U.K. (662,751 cases), London received 489,990 cases of Apples, 37,912 Pears, 3,553 Grapes, 730 Oranges, 29 Passion Fruit, and small quantities of Plums, Lemons and Quinces.

Liverpool received 63,430 cases of Apples, 654 Pears, 100 Oranges. Glasgow, 37,217 cases of Apples, Southampton 17,564 cases of Apples, 500 cases of Grapes; Hull, 9,628 cases of Apples, and Newcastle 1,300 cases of Apples.

Of 203,953 cases of fruit sent to the Continent, Hamburg received 110,490 cases of Apples, 600 Grapes, and 562 Pears; Stockholm received 83,768 cases of Apples, 3,873 of Pears, and 1,794; Oslo received 114 cases of Apples, Rotterdam 2,677 of Apples, and Bogen 75 of Apples.

Of the 50,975 cases of Grapes shipped from W.A. this season, 23,109 went to Colombo, 13,514 to Singapore, 3,553 to London, 1,794 to Stockholm, 1,674 to Samarang, 1,192 to Sourabaya, with small quantities to Port Said, Penang, Bombay, Saigon, Rangoon, Southampton and Hamburg.

DOES IT PAY?

By David H. Case, B.Sc. Agr.

ONCE MORE it is time for the orchardist to apply fertiliser to the ground, and the perennial questions, "What shall I use? Is it worth while?" have to be answered.

Experimental work on fruit in this country is limited, and information on the question of fertilisers is not as full as we would like. But the little we have quite conclusively shows us that properly fed trees, well cultivated and pruned, have an infinitely greater chance of bearing a payable crop than trees not adequately fed. Using the wrong type of fertiliser has caused many growers to lose money. But the men who have consistently fed their trees with a well-balanced fertiliser are more successful than those who have not. Look them over in your district. The successful man is too wise to place all his reliance on fertilisers. His cultivation, pruning, etc., are perfect. But fertiliser occupies a prominent position in his costs for the season, and he would not use it if it did not pay.

In Mildura Recently

the writer discussed fertiliser with one leading grower, who stated that he had undoubtedly got results from the use of potash, plus good drainage, plus green manuring, plus good cultivation, and so on. That is a point which many farmers overlook. Fertiliser gives good results, but only when all the other orchard practices, drainage, cultivation, pruning, humus supply, etc., are as perfect as they can be made. Under such conditions the response to fertiliser may not be very obvious in any one season, as the tree will be in reasonably good heart, and will not readily show signs of starvation. But using a

Well-Balanced Fertiliser,

such as the famous 2 : 2 : 1, annually will supply the tree with a steady supply of all plant foods it requires, and this cannot but make for best possible performance. Men who have followed such a system for years have less trouble from disease and bad setting. At the same time, alternate cropping has been eliminated, and it is obvious that the total quantity of fruit produced has increased. All this means that the grower can accept present day prices with more chance of making a profit on them.

Horticulturists all over Australia recommend as a general rule that the fertiliser be applied in July-August, and got as deep into the ground as possible. In all Eastern States the recommendation is for 5-8 lb. of 2 : 2 : 1, with more for larger trees. Western Australia uses 2 : 2 : 1 very largely but recommends as the best practice that the Super and Potash be applied in Autumn and the sulphate of ammonia in the Spring.

Experiments in Stanthorpe (Queensland) have shown that this practice sound in the Eastern States also. It involves an extra application of fertiliser, however, and most growers prefer the single late winter dose of 2 : 2 : 1.

Shipments to Palestine totalled 4,970, Jaffa being the main receiver, with 2,570 cases of Apples and small quantities of Pears and Grapes. Haifa received 1,412 cases of Apples, Telaviv 558 of Apples, and Jerusalem 400 of Apples.

NON-CORROSIVE EQUIPMENT.

Necessary for Citrus Products.

For 25 years or more the food processing industries of the United States have been working on the problem of developing successful methods for preparing and packing fruit juices in tin, says the "Western Canner and Packer." Back in 1910, Pineapple canners of Hawaii put up experimental packs of Pineapple juice in glass and tin. A few years later citrus growers of Puerto Rico and Florida began making test runs on Grapefruit juice, and about the same time canners in the Pacific Northwest introduced packs of berry and Apple juices to their trade.

It took from 10 to 20 years of constant experimentation, however, to solve satisfactorily the problem of maintaining the color, flavor, and healthful qualities of the acid, volatile juices derived from Lemons, Oranges and Grapefruit. Ordinary canning methods had to be scrapped and new machinery developed before a process was evolved which not only permitted satisfactory canning of citrus juices but also made sure that these liquids would remain in the cans in good condition for an indefinite length of time. Only in the last few years have canned citrus juices won full consumer acceptance.

No small part in this decisive victory of the canned juices over consumer inertia has been made possible through development and application of corrosion-resistant materials in the industry, thus materially improving quality of the products and at the same time reducing equipment replacement costs. A large part of the equipment now in use in the Southern California citrus products business is made from non-corrosive metals, and glass and glass-lined tanks and tubing likewise are encountered in ever-increasing quantities.

Some Advantages.

Principal reasons for using corrosion-resistant materials in the citrus industries are the following:—

The materials are long-lived, and will outwear corrosive equipment many years.

Several of the materials, notably stainless steel, are hard and durable, able to stand up under rough treatment.

The surfaces of these metals and of the glass equipment is generally hard and smooth, making them easy to clean.

Most of them do not deposit mineral salts in the juices, and those which do go into solution slightly do not generally give the food a metallic taste.

Some corrosive materials possibly may deposit salts which will affect the color of the product, or even make it slightly toxic.

Stainless steel meets practically every one of the above qualifications, and the other corrosion-resistant materials also are well-adapted to use in the citrus industries.

Advertising Australian Products

Campaign in Britain.

DURING THE TEN MONTHS ending with June 30 last, the Commonwealth Government and various Australian trade interests contributed £75,000 for publicity in promoting the sale of Australian products throughout Great Britain. It is claimed that no fewer than 45,000 shops are stocking Australian products. A recent luncheon in London, arranged by Mr. A. E. Hyland, Director of Australian Publicity, was attended by 518 merchants and distributors and addressed by Dr. Page as representative of the Commonwealth.

As indicating the extent of three weeks' activity during April and May, Mr. Hyland reported that 893 tramcars and 1,013 motor-vans carried advertisements for Australian goods. In addition, 2,189 posters were displayed on prominent hoardings, 21,738 window and counter display units were employed in British shops, Harrods Ltd. had window displays for two weeks, a stand was erected at the Manchester Grocers' Exhibition, an Australian exhibition shop was conducted for two weeks in Sheffield, and a cinema film showing the preparation of Australian products was used during the campaign. Arrangements are under way for effective displays of Australian products during the Coronation Celebrations next year.

CANADA INCREASES PACK.

The 1935 pack of fruit and vegetables increased well over the previous year according to exchanges. Canned Peaches represented 13,197,000 lbs. or more than double that of 1934. Cherries, Plums, Pears, Raspberries, Rhubarb and Strawberries all increased, but Apples, Blueberries, Apricots and Loganberries decreased.

Vegetable packs increased on the whole, except that Tomatoes showed a decline. Canned Peas went to 60½ million lbs., an increase of 19 million lbs. There were also large increases in Asparagus, pulped Tomato and canned Tomato soup.

EXPORTS TO JUNE 30.

The following exports from Australia as from January 1 to June 30 is advised by the Canned Fruits Control Board. The figures quoted represent dozens of 30 oz. tins, or equivalent:—

Country.	Apricots.	Peaches.	Pears.	Fruit Salad.	Pines.	Total.
U.K.	208,484	644,592	495,656	—	2,500	1,351,232
N.Z.	9,814	8,974	880	—	1,830	21,498
Canada . . .	13,648	77,964	7,286	2,800	—	101,698
East	2,908	7,450	4,828	978	8	16,172
Miscellaneous	654	1,376	2,306	48	291	4,675
Total . . .	235,508	740,356	510,956	3,826	4,629	1,495,275

CANADIAN TRADE COMMISSION.

Treaty Agreements to be Reviewed.

Headed by the Minister for Trade and Commerce, Mr. W. D. Euler, a visit to Australia will be made during next month by a delegation from Canada. They will confer with the Commonwealth Ministers regarding the Australian-Canadian trade treaty. At present, trade is all in favor of Canada, which supplied goods valued at over £4,000,000 last year, and took only £1,500,000 worth of Australian goods.

Canada will be urged to accept more canned and dried fruits and wine from Australia in order to forestall any further quotas being imposed by Australia upon Canadian-made machinery and automobile parts.

LEVER BROS.' CANNERY.

23,000 Tons Fruit Last Year.

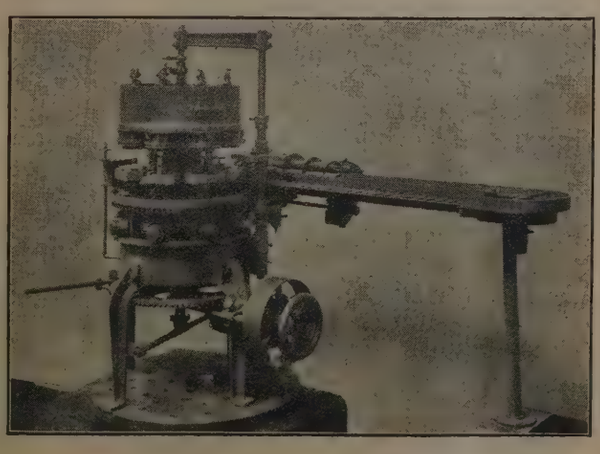
As showing the developments being made by Lever Bros. and subsidiaries in England in the canning of various goods, it is noted that last year they canned two and a half million pounds worth of fish, and 23,000 tons of fruit. To meet increased business arising from improved economic conditions in Great Britain they have spent over three million pounds on new buildings, land, plant and equipment, and still showed a profit of nearly two million pounds, besides increasing their reserve fund to over twenty million pounds.

Vet.: "Your dog is too fat, madam. That is what's wrong. He doesn't get enough exercise."

Lady: "Oh, but he does. I'm sure he does—he goes out every day with me in the car."

The Austral Otis Andebar Cannery Equipment Pty. Ltd.

CANNERY ENGINEERS **South Melbourne, Vic.**



PHONE: M 1257
Box 3, P.O., South Melbourne.

8 VALVE ECONOMY SYRUPER

Manufactured in Our Works from Drawings of

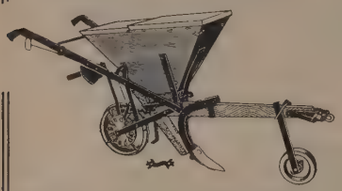
Anderson, Barngrover - - - - San Francisco

SUNSHINE AND MASSEY HARRIS

FARM IMPLEMENTS GIVE GOOD RESULTS WHEREVER USED

—o—

Suntapper Vibrator Fertilizer Distributor

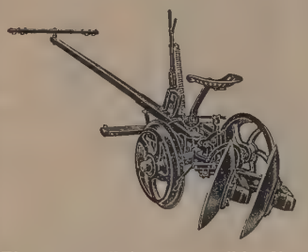


Handy, accurate, one-horse distributor for quick application of fertilizer to trees, vines, plants, vegetables, etc. Vibrating tray governed by uniform tapping of trigger, ensures a positive and regular flow from delivery chute. When the simple, convenient lever-and-rack control is set, continuous and uniform distribution follows—independent of and unaffected by bumps, jolts, or gradual emptying of the hopper. Contact surfaces are specially treated to resist corrosion and ensure free movement of the fertilizer. Convenient pull-rod enables the user to sow continuously or at uniform intervals, or stop instantly when desired. Tyne is adjustable for height or dip. Hopper capacity approx. 125 lbs. Sows any quantity up to 19 lbs. to a chain length. Compact, convenient, accurate, and durable.

With Depth Regulating Wheel, £5 0 0

Ask for the SUNTAPPER LEAFLET—free on request—for full details.

Sungrade Stump Jump Reversible 2-Disc Plough



The most efficient reversible disc plough adjustable to all conditions on hillsides and flats. Special adjustable draught device controls the jump, ensures penetration of hard ground, keeps the discs down to their work, and regulates the draught to a nicety—making a comfortable pull for the usual two horses. Durable 26-inch discs —interchangeable to front or rear to prolong wear—are adjustable for undercut and breast cut, cut furrows 7 to 10 inches wide and up to 10 inches deep, plough to a uniform bottom at all depths, and can be easily changed to a single disc to cut narrow, medium or wide furrows. Obtainable with extension arm and depth-regulating wheel for ploughing away from trees, vines, etc. No complicated mechanism — easy to operate, reverse, steer, and turn, and has few wearing parts.

2-furrow, with pole, neck-yoke, and 2-horse bar £21 0 0

Extension arm with depth regulating wheel, at small extra cost. Ask for the SUNGRADE FOLDER—free on request—for full details.

Prices are for delivery at Sunshine. Discount for cash 2½ per cent. or liberal extended terms can be quoted. Ask the local agent, or write to us for the full details—free and post free.

H. V. McKAY
MASSEY - HARRIS
PTY. LTD.
Sunshine Harvester Works, SUNSHINE, W.20., Vic.

New Zealand News and Notes

NEW INQUIRY INTO THE FRUIT INDUSTRY — EXPORT PRICES AND QUOTAS — PROPOSED GUARANTEED PRICES FOR FRUIT — SIDELIGHTS ON THE CITRUS EMBARGO — PRUNING — CONFERENCES OF N.Z. FRUITGROWERS — RISING PRODUCTION COSTS.

(By Our Correspondent.)

IF INQUIRIES WOULD CURE the ills of the fruit industry, the New Zealand grower would be in a happy position. Some months ago there was an inquiry into export fruit marketing, more recently a Parliamentary Enquiry into the marketing of citrus fruits from the Islands, and now there is to be an enquiry into the marketing of fruit produced in New Zealand and sold locally. It is unlikely that anyone with a knowledge of the industry will dispute the necessity of something being done on the local selling question. Many attempts have been made to remedy existing evils, and under the Dominion Mark Scheme some progress was made in the education of the public to the value of a fruit diet.

We have no doubt that the Government, in instituting this enquiry, is imbued with the idea of remedying the evils that exist in the fruit trade. The greatest evil of all is that the fruitgrower is getting little or no return for his fruit. That is not surprising to anyone with a knowledge of the product if half an hour is spent in inspecting fruit offered for sale in some of the sale rooms. Even fruitgrowers admit this, and yet continue to send forward consignments which can only be catalogued as rubbish. Seventy-five per cent. of growers would be pleased if the Government would say—it must stop.

Why is it that responsible people have to be prevented from doing things they do not want to do?

The greatest advocates of standardisation, and we have plenty of them, are some of the worst offenders in marketing rubbish.

It is going to take a strong Government to put into effect the remedies required, and we incline to the opinion that no Government will be prepared to take the kicks that are sure to be associated with the remedies required. If minimum grading standards are introduced, and that is really what is necessary—not compulsory standardisation—any grower unable to grow good fruit will have to go out of the business. This may be a Spartan law, but it is as it should be if the industry is to make progress.

Export Prices.

Those of us who believed that a quota on New Zealand and Australian fruit shipments would solve the United Kingdom marketing problem have been sadly disillusioned in the last few weeks. In the beginning of June the market commenced to sag under heavy arrivals from Australia and New Zealand, and while this tendency was arrested in early July, the quantities which remain to be sold prohibit any spectacular rise which is necessary to bring late varieties on to what might be termed a payable basis. The English trade seem to be mystified, as on statistics the reason is not readily apparent.

From a distance it seems obvious that heavy quantities of other fruits, such as Oranges and good crops of Strawberries and Cherries in prospect all affected the situation—the speculator probably kept off, and prices suffered accordingly.

The much maligned speculator has a definite value on a weak market.

According to information released, the New Zealand Fruit Board has done its share towards steadying the market by cool storing large quantities of New Zealand fruit, not evidently with any idea of selling later at a higher price, but to prevent any further drop in what was a particularly weak market.

At the end of June there were approximately 400,000 cases of New Zealand Apples still to be sold, with an available marketing period of six weeks. Prices from June 1 onwards were below the cost of production, and the exporter is facing up to the most serious situation that he has yet had to confront.

Guaranteed Prices.

There has been a unanimous request for the Government to institute guaranteed prices, and while individual members of Cabinet have promised assistance, there has as yet been no official pronouncement from the Government as to what they are prepared to do. In our last letter we mentioned that the introduction of a 40-hour week would certainly increase material costs.

The President of the N.Z. Fruitgrowers' Federation Ltd., summed up the attitude of the industry in a very few words in speaking at a recent conference when he said that "the industry would have to run for shelter." It is the borderline industry which will suffer under any policy which has for its betterment the majority of the population. The fruit industry comes under this heading, and unless the Government take prompt action there are many growers will fall by the roadside in the run for shelter.

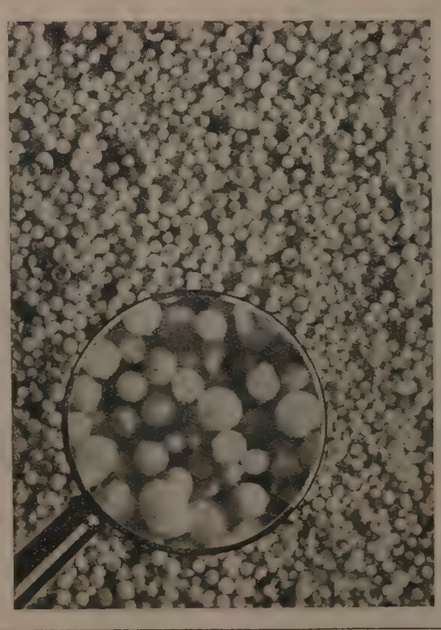
Markets.

Is the remedy of the present situation to be found in further restriction of Australian and New Zealand quantities? We are inclined to think not, as the present restrictions only seem to encourage other countries to reap whatever benefits are available. Fruit from the U.S.A. was arriving in England in late May—and this despite the Ottawa duties.

The Empire Conference

According to newspaper reports, of Fruitgrowers has some suggestions to make, details have not yet been released. We anticipate that they have recommended to the respective Governments some combination of the seasonal quota supported by protective tariffs against foreign fruits entering the United Kingdom. This is probably the only way protection can be given to the English fruitgrower against both the Dominions and foreign countries, while at the same time reserving to the Dominion shipper any marketing opportunity that is available. It is generally admitted that the English grower has a prior right to his own market, even against the rest of the Empire.

Proposals along these lines were discussed at the 1932 Ottawa Conference, but at that time only Australia and New Zealand seemed to appreciate the difficulties that the Empire fruit industries were going to face. If the support of the other parts of the Empire could have been secured at that time the present situation may not have arisen.



CHILEAN 100% EFFICIENT

Granulated Nitrate of Soda

GUARANTEED PURITY, 98-99 PER CENT.

Promotes Vigor — Increases Yield — Improves Quality!

- **The round snow-white pellets ensure even and economical distribution.**
- **Mixes perfectly with other fertilisers.**
- **Is completely soluble, all the nitrogen being immediately available to the plant.**
- **Conserves lime and prevents the development of acid or sour soil conditions.**
- **It is delivered in 1 cwt. jute water-proofed lined bags, and reaches you in first class condition.**
- **Quick and sure in its effects, and the best means of increasing yield and improving quality.**
- **Not a single grower who has used it has anything but praise for Chilean Granulated Nitrate of Soda.**

Chilean Nitrate of Soda Agricultural Service

44 Margaret St., G.P.O. Box 2037, Sydney

Citrus Embargo.

The first shipments of South Australian Oranges have arrived. Prices are to be the same as for 1935, i.e., 15/- to 21/- per case wholesale.

Already correspondents to the daily press are bewailing the fact that owing to Government interference citrus is unavailable in New Zealand at a reasonable figure. According to market reports Oranges are selling in the Sydney markets at 5/- to 9/- per bushel. **At this price, consumption in New Zealand would be doubled, to the benefit of everybody connected with the industry.** In fairness to the South Australian fruit it should be mentioned that the cases contain approximately 1½ bushels. Mandarins are even more expensive, and are selling at a fixed price of 26/- per case. A few years ago New South Wales Mandarins were available at 6/- to 7/- per case. Some correspondents are very sore about the whole business, and suggest that if the State would keep out of the business both the public and the shopkeeper would benefit. The producer is not even mentioned, but presumably he would get at least some consideration.

Pruning.

A system of pruning introduced into New Zealand by a prominent grower in the Hawke's Bay district is becoming very popular, and is extending to other parts of New Zealand.

It is based on a reduction to

Four Strong Leaders

carrying a plentiful supply of laterals. On grafted trees the leaders are not allowed to carry spurs, and are not pruned, all fruit being carried on laterals, none of which are within 3 feet of the ground. It is claimed that very much better results are secured. The advocates recommend that with old trees the leaders gradually be reduced to avoid sudden shock to the root system.

To secure crops of continued high quality, fruiting laterals are replaced every few years by new growth, so that all fruit is produced on comparatively new wood. While the system seems to be applicable to practically all varieties, Delicious require five or six leaders to carry sufficient laterals to fill up the tree.

Undoubtedly there is quite a lot to recommend the system. It is a recognised fact that fruit produced on old trees has not the same appearance as fruit from trees which have reached maturity but are still young. Whether all types of land will give the same results has not yet been proved, but as usual the fruitgrower is always prepared to try something for himself, and it will not be long before information is available on the success or otherwise of trees grown under this system on lighter land.

Conferences.

Judging from the remits to be considered at the Annual Conference of the N.Z. Fruitgrowers' Federation Ltd., to be held on July 28, the delegates will have an interesting time trying to intelligently discuss 141 remits in a period of two days. Of course, a number of the remits are duplications, but nevertheless it appears to your correspondent that a review of the system is long overdue.

This important annual meeting would have been much better engaged in dealing with half a dozen remits of real importance than rushing through an Order Paper, half of which is made up of suggestions which could well be handled by the Directorate. On important subjects each delegate is surely entitled to voice the opinion of his district, and as there are 34 entitled to speak at the Conference, allowing each delegate 2 minutes with no extensions, over an hour would be absorbed in dealing with one subject. As usual there will probably be a dozen remits dealt with on the first day and there will be no alternative but to rush the business through on the second day to the detriment of the results expected.

A lengthy order paper certainly shows an active interest being taken by growers and their Association, but it is not conducive to concentrated work, and the mere passing of remits is practically valueless. The Order Paper for the Export Conference is certainly an improvement, but even here Export Delegates will have 58 remits to deal with in one day, so they are actually little better off.

This criticism is not our own—we have heard similar opinions expressed time and time again by past delegates to conference. Arising out of the remits will be deputations to Cabinet Ministers, etc., all of which take time.

The American system of

Having Sub-Committees

to deal with different phases of the business, the Sub-Committees reporting to the full conference the following day, has many advantages, although it has a distinct disadvantage in that delegates interested in all phases of the industry lose the opportunity of listening to the full discussion. The remedy of the present position seems to rest with the Directorate, who should make some concrete suggestions to the next conference.

Production Costs.

With the increase of wages, and probably in anticipation of the 40-hour week, New Zealand is entering a period of rising costs. It is not anticipated that spraying material will show any immediate increase, most of these are imported, and although raw material markets are moving upwards, retail prices are not yet affected. Boxes have already risen, and it is anticipated will go further. The industry is turning its attention to the possibility of imported cases. For some years now local millers have catered for the bulk of the requirements, but with imported boxes offering at 9d. and the local at 10d., in some cases higher, it is only to be expected that fruitgrowers are commencing to take an interest in the imported article.

The attitude of the Government has not yet been defined. Naturally they will want to keep the business within the country. However, they must realise that the New Zealand grower cannot be expected to compete on the overseas markets under a handicap which has no effect in securing on overseas market any higher return for produce exported.

WHITE ANTS.

Prevention of Damage to Fruit Trees and Vines.

When clearing land for orchards or vineyards, great care should be exercised to remove all stumps and roots from the ground. Any white ants' nests in the vicinity should be destroyed (states the N.S.W. Department of Agriculture).

When trees become infested, cut out the damaged wood if possible. Avoid scarring the trees near the base, as these scars are likely to induce white ant attack. Dead or dying infested trees should be removed and burnt.

Where the roots are attacked, the use of paradichloro-benzine or other soil fumigant is suggested. This will destroy the white ants attacking the roots, and in the adjacent soil, and will act for a time as a preventive. To apply the fumigant, dig a circular trench 3 to 4 inches deep, at a distance of 6 inches from the trunk of the tree, and scatter 2 oz. on the bottom of this, afterwards filling in with soil. The fumigant is more active when the soil is warm than when it is cold, and is not effective when the soil is saturated with water. For young trees a dose of 1 oz. is sufficient. The dosages must be measured carefully, as excess of this substance is likely to kill or damage the tree.

In tea plantations in Ceylon and elsewhere, Paris green has been used with success in controlling white ants attacking the living plants. The practice is to bore a hole with a gimlet into the infested portions, and then blow in about 1/12th oz. of Paris green, and afterwards seal the opening. The treatment is said to be entirely harmless to the plants.

COLORFUL FRUIT DRINKS.

In order to stimulate the drinking of fruit drinks, American restaurants are now using Neon tubes for stirring the drinks. Immediately the Neon rod is put into the liquid, electro-chemical reaction produces unusual fluorescent rays which illuminate the drinks in any desired color scheme, says "Food" (Vic.).

CANNER AND PACKER YEAR BOOK.

A Valuable Publication.

The 1936 Year Book and Statistical Number of the Western Canner and Packer (U.S.A.), is an ambitious attempt to give readers interested in the canning industry a comprehensive survey of the canning business, and a study of last year's conditions.

Comprising 240 pages of high-class printing and profusely illustrated, it adds status to the regular publication of the monthly journal. Spirally bound, it is serviceable as a reference book for the trade, whilst its contents include articles upon canned fruits, canned and glassed vegetables, dried fruits, frozen foods and canning and packing equipment.

RECENT REGISTRATIONS.

Drysdale Asparagus Co. Pty. Ltd. (Vic.). Capital, £10,000. Subscribers: Henry Wiliams, Ernest Walter Williams, James Carnie, Joseph John Bertram Whitcombe, Robert Austin Whitcombe.

Flavour-Sealed Food Company, 10-12 Egan-street, Newtown, N.S.W., manufacturers of condiments and preserved foods. Proprs.: Henry J., Frank A., and David C. Quinn.

Hurstville Health Foods, 289 Forest-road, Hurstville, N.S.W., dried fruits, nuts, and confectionery. Propr., Solomon B. Cohen.

Pura Preserves, 2 Sylvia-street, Chatswood, N.S.W., preserves. Prop.: Elizabeth M. Berneys.

Red Star Products, The, Pacific Highway, Crow's Nest, N.S.W., retailing dried fruit and nuts. Prop.: Ethel A. May.

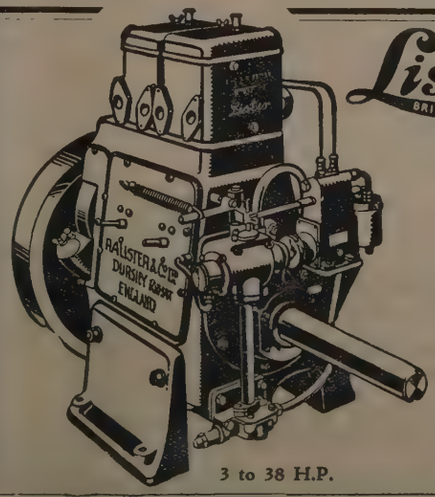
I. Friedmann

FRESH, DRIED & —— CANNED FRUIT.

I guarantee shippers highest market prices and prompt settlements.

Large clientele for Canned, Dried Fruit and Pulp.

20 BEDFORD CHAMBERS,
COVENT GARDEN
LONDON, W.C.2.



3 to 38 H.P.

Lister BRITISH BUILT

Crude Oil Engines
FOR DUSTY CONDITIONS

Listers are eminently suitable for dusty conditions, as engine is totally enclosed, bearings are dust-proof and automatically oiled. Run day and night without attention.
Start easier than a petrol engine, even below freezing point.
Thousands of the reliable British Listers are giving
THE WORLD'S CHEAPEST POWER
for mines, operating cranes, winches, private cool stores, electric lighting, battery charging, factories, farms, dairies, etc.
Fuel cost per hour: 3-h.p., 1½d.; 5-h.p., 2¾d.; 7-h.p., 2¾d.; and up to 38-h.p. as marvellously low.
Mr. J. Robinson, High Street, Scoresby, stores over 6,000 cases of fruit for £25 per year for crude and lubricating oil—a cost of one penny per case, and the engine never gave the least trouble. Compare with your cost.

EASY TERMS. WRITE. Please mention this advt.

MITCHELL & CO. Pty. Ltd.
Head Office, W. Footscray, W.11. Showroom, 596 Bourke St.

Nitrogen and Fruit Production

The promotion and maintenance of a high degree of soil fertility are the primary objects of the various cultural practices which are regularly adopted by growers in the ordinary routine of fruit production. Modern methods of cultivation, combined with the judicious use of fertilisers, have shown clearly that fertility can be maintained at a high level despite the fact that each crop removes relatively large amounts of plant food materials from the soil.

It is well known that in many cases nitrogen is the main nutrient factor governing the production of various classes of fruit, and consequently it is essential for growers to take the necessary steps to ensure that a plentiful supply of nitrogen is available to the trees. The best means of doing this is by the growth and subsequent ploughing in of winter growing green manure crops, combined with the correct use of a nitrogenous fertiliser, such as Chilean Granulated Nitrate of Soda.

The main value of a fertiliser of this type is that it enables the grower to provide the trees with an abundance of readily available nitrogen at the period when it is most needed. Fruit trees require their maximum nitrogen in the early spring months to promote blossoming and new growth, and to ensure that a satisfactory setting of fruit is obtained. It so happens that during this critical period the amount of available nitrogen in the soil is usually very low, as during the winter months the biological decomposition of the complex organic substance from which the soil's nitrogen is normally derived is considerably retarded by low temperatures, and, in addition, a great deal of available nitrogen is washed out of the soil by the heavy winter rains.

When it is realised that nitrogen is the main plant food which governs vegetative growth and vigor, and that owing to natural causes soils are usually low in nitrogen following the winter months, it can readily be appreciated that a spring application of a suitable nitrogenous fertiliser will prove of great benefit to the trees.

The importance of nitrogen in the production of heavy yielding and high-quality crops of citrus fruits has long been recognised, and it is now known that when used judiciously, either alone or in combination with superphosphate and potash, nitrogenous fertilisers are of the utmost value to both stone and pome fruits.

Comprehensive experiments with nitrogenous fertilisers in Apple orchards conducted several years ago by the New York Agricultural Experiment Station, U.S.A., showed that the largest and most consistent yield of Apples were obtained from trees which received their nitrogen in the more readily available forms, such as Chilean Nitrate of Soda.

"This is a sunset my daughter painted. She studied painting abroad, you know."

"Ah! That explains it. I never saw a sunset like that in this country."

◂ FRUIT TREES ▸

Of Outstanding Quality

True to name, healthy and well-rooted. Citrus trees in large quantity — Budding Wood supplied by the Bud Selection Society of N.S.W. — Worked on LEMON, SWEET ORANGE, and TRIFOLIATA Stock.

CATALOGUE FREE ON APPLICATION. ESTABLISHED 1901.

L. P. ROSEN & SON, Fernhill Nurseries

Pennant Hills Road, CARLINGFORD, New South Wales. Phone: Epping 96.

Cables—Monro, London Codes—A.B.C. 5th Edition and Bentley's

GEO. MONRO Ltd.

The Most Important Fruit-Distributing Organisation in the World.

COVENT GARDEN MARKET, LONDON, and SMITHFIELD MARKET, MANCHESTER

Other Branches: BIRMINGHAM, GLASGOW, WORTHING, SPALDING and HULL

Sales on Commission, by Private Treaty only.

Over sixty years' of Fruit Distribution.

We do not purchase.

Our Sale Rooms are the largest and most up-to-date in England; consignments are therefore displayed to the best advantage, consequently, our returns are the best.

We have specialised in the Sale of Australian Apples and Pears by expert salesmen for many years past, and we have the largest and best customers in Great Britain amongst our clients.

Bigger and better business is our objective.

We make advances to cover cost of freight, etc.

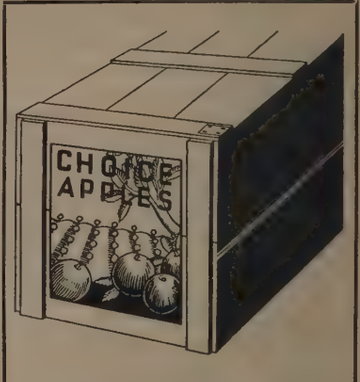
(Established 1862)

DIRECTORS:

Major Edwin G. Monro, O.B.E. (Chairman), Geo. Monro, C.B.E., Bert J. Monro, Captain J. Stuart Monro, Alex. J. Monro, and C. Cole.

Chief Agent in Aust.—Major H. Dakin, V.D., Goldsbrough House, Macquarie Place, Sydney, N.S.W.

Victorian Representative	Esmond Russell Pty. Ltd., 395 Collins St., Melbourne.
Southern Tasmanian Representative	W. H. Ikin & Son, Dunn Street, Hobart.
Northern Tasmanian Representative	Bell & Gerrard, No. 200 Cimitiere St., Launceston.
West Australian Representative . ..	The Westralian Farmers Ltd., Perth.



GOOD LABELLING
Demands
THE BEST PASTE

That's

DAVIS 333 ADHESIVE

THE BEST
COLD WATER PASTE
IN THE WORLD

Obtainable from all Hardware, Paint and other Stores.

Citrus News and Notes

Australian Oranges for New Zealand

ONLY SOUTH AUSTRALIAN ORANGES ACCEPTED — AVERAGE PRICE 17/10 PER CASE.

Efforts by Jamaica to Capture the Trade.

JUST HOW SERIOUSLY the N.Z. embargo on citrus fruits had affected N.S.W. was revealed in the annual report of the Fruitgrowers' Federation of N.S.W.

In 1932, Australia exported to New Zealand 223,632 bushels of Oranges, of which approximately 80 per cent. was sent from New South Wales, which means, in effect, that New South Wales exported to New Zealand in that year 179,000 bushels.

In 1935 South Australia exported 163,146 bushels.

Mention of these figures, states the Federation, will indicate how well South Australia has developed this market, which reflects very much to the credit of the growers' organisation in that State. A further lesson may be learned when it is realised that the whole of the fruit averaged wholesale price of 17/10 per bushel. In contemplating these figures, further consideration may be given to the fact that neither Valencia Oranges nor Mandarins are grown to any extent in South Australia. The average price of New South Wales Oranges on the New Zealand market in the years just prior to the embargo could reasonably set down at from 7/- to 11/-, with possibly a few sales at 16/- round about Christmas time, so that South Australia, in averaging 17/10, has done remarkably well in the market, particularly for such a large quantity.

As indicative of

The Permanent Injury

likely to result to the New Zealand-Australia orange trade as a result of the embargo is the effort being made by the Jamaican Government to encourage citrus plantings in that island. A report was recently noticed, indicating that the Government of Jamaica is prepared to finance citrus growing, and has taken the following measures:—

(a) A packing house has been erected and leased to a producers' association.

(b) Large nurseries have been established with bud selected varieties.

(c) Field services are provided to growers, and export must conform to the standards required in the markets that are being sought.

(d) Existing Orange trees are being worked over to accepted commercial varieties, and to achieve these modernisings of existing orchards, financial assistance is being given to the industry.

(e) The sum of £5 per acre is available to assist in clearing and repairing land for citrus trees, and an annual sum of £1 per acre is available for maintenance for four years.

Co-operative Bud Selection Society Ltd.

During the year there was no change in the personnel of the Board of the Society. The Federation's representatives on the Board are:—Messrs. J. Heane, H. S. Robinson, H. G. Such, F. B. Mackenzie, and A. S. Brown; the nurseryman's representatives being Messrs. T. Adamson and J. W. E. Larsen. As in the past, the Department of Agriculture has been represented by Mr. R. J. Benton, acting in an advisory capacity.

The Society supplied the following selected buds to nurserymen during the 1935 budding season, trees from which will be available for planting for the 1936 planting season.

Nurseryman	Wash Navel.	Valencia.	Eureka.	Lisbon.	Marsh G. Fruit.	Total.
Swane Bros.	2,000	2,000	1,000	—	500	5,500
A. T. Eyles	1,000	1,000	500	500	500	3,500
L. P. Rosen & Son	7,000	5,000	5,000	1,000	3,000	21,000
T. Adamson	2,000	2,000	2,000	—	500	6,500
Geo. McKee	1,000	1,000	—	—	—	2,000
Briggs Bros.	800	—	—	—	—	800
R. Hughes	—	500	1,000	—	—	1,500
H. J. Ferguson	250	250	—	—	—	500
F. E. Spurway	2,000	1,000	300	200	200	3,700
F. Ferguson & Son	1,000	1,000	—	—	—	2,000
	17,050	13,750	9,800	1,700	4,700	47,000

Fruit Trees & Fruit Tree Stocks

Splendid Stock of Healthy Plants Available.

APPLES, PEACHES, PEARS, PLUMS, APRICOTS, CITRUS, ETC., PACKED AND DESPATCHED TO ALL PARTS OF THE WORLD.

Overseas Orders receive careful and prompt attention.

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C. A. Nobelius & Sons Pty. Ltd.

Gembrook Nurseries, EMERALD, VICTORIA

'Phone: Ringwood 171.

CITRUS.

Decline in Production.

Planting and Re-working.

Manuring and Drainage Important.

IT IS GENERALLY RECOGNISED that an increasing number of citrus trees are declining in production. Whilst the causes of this state of affairs are mainly economic, it is recommended that whenever possible the trees should not be allowed to decline unnecessarily. Irregular production is normally a serious problem, but a general interruption to the quantity of fruit produced is likely to have a more serious effect on the industry.

Without some expenditure of money to fertilise such trees and to minimise diseases by spraying, etc., rehabilitation difficulties are somewhat increased. Maintenance of trees in at least a reasonable condition without undue cash outlay is often possible, however, by increased attention to cultural practices, drainage, re-soiling and a limited amount of pruning at the present time. The latter should be confined to the removal of dead wood on heavily pest-infested limbs.

Whilst citrus trees are extremely tenacious in a suitable environment and may exist for years in a very unthrifty state, their recovery is made increasingly difficult by prolonged starvation.

Planting and Re-working.

In localities not subject to severe winter frosts planting of citrus trees may be done this month. This operation should be completed as early as possible, however, to ensure the young tree being established before winter. As a rule it is unnecessary to use fertiliser at the time of planting. Plant the tree with the bud union well above ground level.

In regard to re-working unsatisfactory varieties of citrus trees, the present time is likely to give the best results. If the trees were re-headed as recommended in the springtime, excellent shoots should now be available into which buds may be inserted.

In the selection of wood for budding, every care should be taken to ensure that only wood obtained from trees producing fruit of the desired characteristics is used. If conditions result in an unsatisfactory "take," this may be observed within three weeks of the operation and more buds can be inserted.

As a rule, buds inserted on the inner side and near the base of the limbs, receive most protection. Use plenty of buds, inserting from six to twelve or even more, on a tree as the greater the number, within reason, the more assistance will be given to rehabilitation. — ("N.S.W. Agri. Gazette.")

S.A. ORANGES FOR N.Z.

A report from Wellington, N.Z., on July 20 states that the Government has decided to allow the importation of 5,000 more cases of South Australian Oranges during August. Permission has also been given for a total entry of 34,000 cases during September. The Minister for Customs (Mr. Nash) said that if necessary additional quantities would be allowed to enter New Zealand.

N.Z. RETAILERS SEEK N.S.W. ORANGES.

In a letter just to hand from the South Island (N.Z.) Retail Fruiterers' Association, the Secretary, Mr. H. A. Newell, of Dunedin, states they have been actively engaged for some time past in trying to have the embargo on Australian citrus removed.

This Association organised deputations to the last N.Z. Government, and also to the present Labor Government.

Mr. Newell is seeking to make contact with citrus growers' organisations in Australia to do everything possible to secure the lifting of the embargo.

Citrus at the "Royal"

Packed Fruit Displays.

In conference with Mr. Schwennesen, V.C.C.A., and Mr. Provan, Department of Agriculture, the Royal Agricultural Society has agreed to an alteration from the usual competition in the citrus fruit section. This year Citrus fruit packed in cases and representative of the main commercial varieties will be shown. In this way less expense will be needed in fitting up an elaborate display, consequently smaller districts should be represented.

The schedule provides for a collection of packed citrus fruits and is open to any Australian Citrus Growers' Association or affiliated member. The exhibit to consist of not less than two bushel cases (either dump or standard). One case to be wrapped and one case un-wrapped, of the following varieties:—

Washington Navel, Valencia Late, Marsh Seedless Grapefruit, Lemon, one variety of common Orange or Mandarin. Cases may be labelled, but must be branded to conform with local marketing regulations. Judging will be made on the following scale.

External Appearance.		
Case appearance	5	
Markings and/or labelling	3	
Nailing, strapping and binding	2	
	—	10
Attractiveness of Contents.		
Fullness of color	5	
Evenness of rind texture	5	
Freedom from disease or blemish	5	
	—	15
Packing.		
Fullness of case	5	
Alignment	2	
Wrapping	3	
	—	10
Grading.		
Uniformity of size and shape	5	
Uniformity of color	5	
Uniformity of texture	5	
	—	15
Condition.		
Firmness of rind	7	
Absence or waste	10	
	—	17
Quality.		
Juiciness	15	
Flavor, including sweetness	10	
Freedom from rag	5	
Thinness of rind	5	
	—	35
Total Points		100

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IN REFRIGERATOR or COOL, WELL VENTILATED 'TWEEN DECK specially adapted for Fruit Carriage and fitted with powerful Electric Fans.

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Sail every Saturday for Townsville and Cairns.

CARGO VESSELS sail Weekly for Sydney and Brisbane (Tuesdays).

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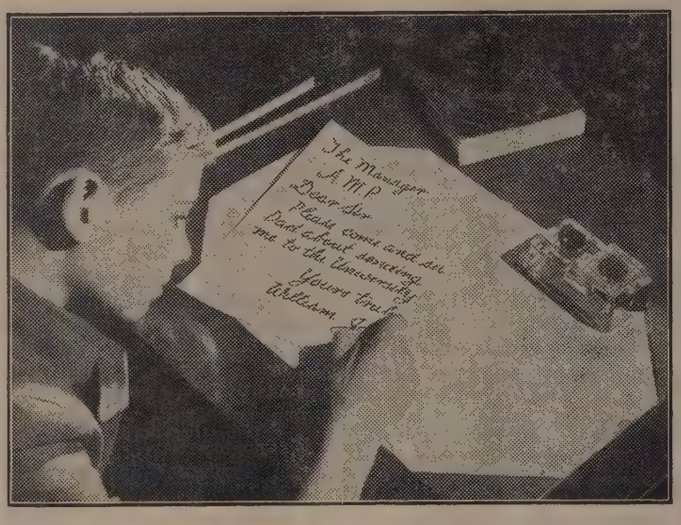


Thief of a child's EDUCATION

THE A.M.P. Society has a way of helping fathers to send their boys (or girls) to the University. Fathers and mothers with young children should let the nearest A.M.P. office explain the way to them.

The best age at which to begin planning for a boy's career is when he is born. At that age a man can, without it costing him more than his tobacco, ensure that there will be £75 or £100 a year available to his son for the years that he is at a University; ensure it in such a way that the arrangement will stand, even though he (the father) die the next day.

If the boy (or girl) should not elect to go to a University, and should prefer to go into business (or the girl to marry), the Society will pay a lump sum instead. Many a young man has had a good start in business with the proceeds of an A.M.P. policy as capital, and many a girl has had a goodly marriage dowry, as the result of a father's forethought when they were toddlers.

Parents would do well to ask the nearest A.M.P. office to send an experienced adviser to talk this matter over with them; either that or to send for booklets. Procrastination may be the thief, not only of time, but of a child's education.

A.M.P. SOCIETY

C. A. ELLIOTT, F.I.A., Actuary. A. W. SNEDDON, F.I.A., General Manager.

BRANCH OFFICE: 425 Collins Street (Cnr. Market Street), MELBOURNE, C.1.

VINCENT WHEATLEY, Manager for Victoria.

Head Office: 87 Pitt Street, Sydney.

Other Branch Offices at Brisbane, Adelaide, Perth and Hobart. District Offices throughout all States.

Citrus Bud Selection

THE OPERATIONS of the Co-operative Bud Selection Society Ltd. are favorably mentioned in the recent annual report of the Fruitgrowers' Federation of N.S.W.

During 1935 buds to the extent of 47,000 were distributed to nurserymen for trees to be available for the 1936 budding season.

The following buds were supplied during the 1936 budding season.

Nurseryman.	Wash Navel.	Valencia	Marsh G. Fruit.	Eureka.	Lisbon.	Emperor Mandarin.	Total.
L. P. Rosen & Son ..	11,000	8,000	3,000	3,000	1,000	1,000	27,000
T. Adamson	5,000	4,000	—	2,000	—	—	11,000
A. T. Eyles	1,500	1,500	—	—	—	—	3,000
F. E. Spurway & Son	2,000	2,000	400	300	300	—	5,000
H. J. Ferguson	500	500	—	—	—	—	1,000
R. W. Wallent	1,500	750	—	750	—	—	3,000
A. S. Brown	—	400	—	—	—	—	400
W. Smith	1,500	1,500	—	—	—	—	3,000
	23,000	18,650	3,400	6,050	1,300	1,000	53,400

During the year reports were received from growers who purchased trees propagated from the Society's buds during the first year of the Society's activities, as these trees are now coming into bearing. Reports indicate complete satisfaction, but as the trees have not yet reached a stage of maturity sufficient to justify a special report, the matter will be considered next year, when a report will be published showing evidence of the value of the operations of the society.

DEPUTATION TO MINISTER.

Citrus Problems Stated.

A deputation from the Victorian Central Citrus Association waited upon the Minister for Agriculture (Mr. Hogan) on July 22, to discuss several factors affecting the industry. The deputation consisted of Messrs. D. B. Halhed (Chairman of the Association), A. E. Cameron (Red Cliffs), D. J. Walters (Murrabit), and P. Cobbett (Rochester), they were introduced by Messrs. Allnutt and Martin, Ms.L.A.

Three considerations were presented. A greater supervision of the control measures applying to Red Scale, telephones for orchard supervisors, and increased salaries for officers of the Department of Agriculture engaged in research work.

In reply, the Minister stated that he approved of compulsory fumigation to meet the Red Scale trouble, and an additional officer would be appointed who would devote his attention to this work from November to April, beginning in the Mildura district.

With regard to telephones he appreciated the assistance to growers that this facility would bestow, and would confer with the State Treasurer upon the matter. He would also go into the matter of the salaries as raised by the deputation.

FRUIT MARKETING.

Committee Formed in N.Z.

Advice has been received from the New Zealand Department of Commerce that a Committee of Enquiry has been appointed to investigate the marketing conditions as affecting fruit and vegetables in the Dominion. Evidence will be taken on oath, in camera, and the Committee will visit all major fruit producing districts commencing during the first week in August in Otago. The investigation will occupy about six weeks.

The personnel of the Committee is: Mr. A. Coleman, Barrister at Law, Chairman, and Messrs. J. A. Campbell representing the Department of Agriculture, and J. E. Thomas representing the Department of Industry and Commerce.

Representations have been invited from the Commonwealth of Australia for consideration in regard to the export of Australian fruit to New Zealand, and it is expected that the embargo on citrus fruit will be discussed.

The Victorian Central Citrus Association have deputed their general manager, Mr. A. W. Schwennesen to prepare a case for Victorian growers and to personally visit New Zealand for the enquiry. We also understand that the N.S.W. Citrus Federation will also submit evidence and are proposing to send their President, Mr. J. Heane, and Secretary, Col. E. E. Herrod, to present the case for N.S.W. growers before the Committee.

ORANGE BOUNTY FOR 1936 SEASON.

The Acting Minister for Commerce (Mr. Thorby) has announced the decision of the Commonwealth Government to grant a bounty of 2/- per export case on Oranges shipped to U.K. during the 1936 season, subject to conditions similar to those laid down for the bounty on exports last year.

With the object of forming a citrus Advisory Board for Australia, Mr. Thorby stated that the Government intends to call a conference of the citrus industry as soon as practicable. The principal function of the Board would be to formulate plans for the efficient handling and marketing of citrus fruits from the year 1937 onwards.

The Australian Producers' Wholesale Co-operative Federation Pty. Ltd. notify that they have vacated their premises at 497 Collins-street and have entered into occupation of offices at Dominion Chambers, 59 William-street, Melbourne. The telephone number, Central 3949, will remain unchanged, but M 5305 will be substituted for Central 10067.

AMONG THE RETAILERS

Monthly Meeting — Saturday Half-holiday Advertising—Price Cutting.

The following information has been supplied by courtesy of Mr. E. W. Thompson, Secretary, Melbourne and Metropolitan Retail Fruiterers' Association.

Retailers' Monthly Meeting.

The monthly meeting of the Executive of the Retail Fruiterers' Association was held in the Temperance Hall, Melbourne, on July 8; there was a good attendance of delegates.

Amongst the correspondence received was a request from a Werribee resident, asking was it possible to secure any trade journal appertaining to the fruit trade, as the writer intended shortly to enter the trade, and desired to gain all the information he could in reference to same. The Secretary reported he had complied with the request, and gave full particulars re the "Fruit World," and also congratulated the writer on his ambition to gain whatever knowledge possible beforehand.

Another letter was received from the Wholesale Fruit Merchants' Association, expressing the views of its members in reference to a later opening hour of the Victoria Market. This led to some discussion on the matter, and, as there was some diversity of opinion amongst delegates, it was decided to take a vote of our members, and the Secretary was instructed to procure voting papers and take the vote of all members as soon as possible on the subject—delegates considering this the fairest way to get the views of the retail section of the trade.

Some discussion also took place on the parking question, some retailers stating they had been threatened with prosecution for parking in unused stands in the new sheds, and the Secretary was deputed to confer with Mr. Minns on the matter, and endeavour to get some improvement in the parking conditions at the market if possible.

The Secretary and Mr. Trivett reported that the signing of the petition for the

Saturday Half-Holiday

for the winter months was almost completed, and that in some of the suburbs the shopkeepers were almost unanimous in favor of the proposal, fully realising that with Friday the principal marketing day they would be in a much better position to expedite their outside orders, and thus enable many housewives to also enjoy their Saturday as well.

It was also decided that the next meeting would be held on Thursday, August 6, at 8 p.m.

Disposal of Garbage.

Retail fruiterers are advised not to leave piles of Cauliflower and other leaves on the roads around the market when loading their vehicles at the market. Of late there has been such an increase in the quantity of refuse strewn about that the Council has been forced to threaten action against the culprits, many of whom, besides leaving fresh leaves, take in quantities of stale garbage from their shops and deposit it in the vicinity of other person's trucks.

Anyone detected at that need expect no mercy. It is also a punishable offence to cart rubbish in and deposit it in the rubbish pits at the market, as those pits are only for the stall-holders at the market. Recently heavy fines have been inflicted on many suburban fruiterers for depositing their refuse in undesirable places, and a special watch is being kept for offenders, the practice having become so prevalent.

Ten Ways to Kill an Association.

1. Don't come to any of its meetings.
2. But if you do come, come late.
3. If the weather doesn't suit you, don't think of coming.
4. If you do attend a meeting, find fault with the work of the officers and other members.
5. Never accept office, it is easier to criticise than to do things.
6. Nevertheless, get sore if you are not elected on a committee, but if you are, do not attend the committee meetings.
7. If asked by the chairman to give an opinion regarding some important matter, tell him you have nothing to say, and after the meeting tell everyone how things ought to be done.
8. Do nothing more than is absolutely necessary, but when other members roll up their sleeves and do it, howl about the Association being run by a clique.
9. Hold back your subscriptions as long as possible, or don't pay at all.
10. Don't bother about getting new members. Let the other fellow do it.

Why Not Advertise?

Persons who have not given the subject of advertising serious thought may be inclined to believe that standard products and other merchandise could be sold cheaper if the manufacturers and the producers did not spend so much money in advertising their goods.

But experience shows the contrary is the truth.

Every person or every concern which seeks a general market for their goods find it necessary to set aside a certain sum each year for advertising to the public through some channel, or otherwise what they have to dispose of, and this is charged as part of their operating expenses, the same as rent, fuel, insurance, etc., their aim being to buy the largest possible circulation among persons interested in their product.

Every business has certain fixed charges which must be paid out of the receipts from the business, and the larger the volume of business that can be created, the less per article is charged for overhead expenses.

This volume of business is undoubtedly obtained only by creating a demand for the goods, and it is more speedily and cheaply done by wide-spread and aggressive advertising. The same principle can be applied in the business of the smaller merchant, or the manufacturer in a small way, or even the orchardist or any other grower—the more business they create by these methods the smaller the cost and the greater the profit.

Price Cutting.

The price-cutter, like the poor, is always with us, and equally like poverty, there appears to be no known cure for him. As a matter of fact the same conditions that bring about poverty bring about price-cutting, and price-cutting is closely associated with thriftlessness and the more insidious forms of human frailty.

The price-cutter from choice is mean by nature, and he seeks by mean methods to get himself the business of others. He knows in his own mind just how sordid human nature can be, and he plays up to the public meanness and selfishness, a form of low mentality that is quite senseless, usually, on the part of the public.

The price-cutter, therefore, is the enemy in practice to all the uplifting teaching of civilisation, although he may know little, and think even less of it. His trading instincts are perverted, and he does not even try to get them right; in fact, the cutter from choice cannot help being a cutter any more than the individual with criminal instincts can help committing crime against society.

If his behaviour was and could be confined to his own business, the matter would not be worth consideration, but because of our loyalty to each other, his conduct cannot be ignored. and we find otherwise sensible people being dragged into the whirlpool from which they may be unable finally to escape.

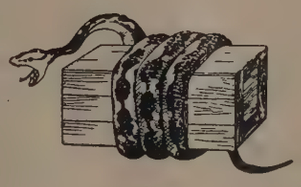
The cutter's goods are seldom worth more than he gets for them, although one must confess that traders who are drawn into this cutting business are generally forced to sell at unremunerative prices.

Golden rules to follow in business are:—Give personal service when possible; watch your own business and not what your competitor is doing; be above board in all your dealings, and tell nothing but the truth; do not overcharge for your goods, get a fair price and a good turnover will follow.

"The more you show, the more you sell" is a true slogan. Make your business as attractive as finances will permit, thereby inviting new customers and the old ones to return.

Nothing helps so much in business as taking a genuine personal interest in each customer. Study their likes and dislikes. Try to remember their preferences and fads. Make them feel that you are as anxious to satisfy them as you would be to help your own relatives or friends. Be careful not to offend crotchety or fussy customers, go out of your way to please them wherever possible. Little efforts to be of service, by giving advice and suggestions, if tactfully proffered, will often make staunch friends of your customers and secure their personal recommendations.

"Confidence, engendered by years of service, will always merit the esteem and patronage of the public. There is no magic formula to meet the situation, but hard work and strict attention to business bring rewards commensurate with the effort."



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All Classes of Packing.

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Phone: MA 4392.

South Australian Agents:

GOLLIN & CO. PTY. LTD.,
110 NORTH TERRACE, ADELAIDE.

CITRUS NOTES—(Continued from page 24).

POTASH HELPS CITRUS TREES

Experiments in U.S.A.

In analysing the value of potash fertilisation as demonstrated in actual experiments made, Mr. J. H. Currie reports in a recent issue of "Pacific Rural Press," that better grades were received from crops taken from trees subjected to a potash treatment. He is speaking of Californian citrus groves on which nitrogen fertiliser is the most popular.

In looking over the fertilisation programme, nitrogen definitely leads the fertiliser procession in the citrus groves of the south. The results from nitrogen fertilisation have been definite and gratifying. The crops from failing orchards have been doubled or trebled by the proper use of this plant food. Nitrogen is the growth element and is essential to vigorous plant growth. Its use in a fertilisation programme has been thoroughly established.

But this cannot be said for the other two limiting plant foods—phosphates and potash. These two elements have been provided in manures and complete fertilisers, but in many cases it has been difficult to definitely show that either of these elements have been beneficial.

In many cases phosphates have proved of benefit when applied to leguminous crops in citrus orchards. This benefits these groves as cover crops are turned under to add humus and plant food to hungry soils.

But what about the third element —potash? Is it or is it not needed in the citrus fertilisation programme? Potash is often designated as the "quality element." Would the addition of potash to some of the southern soils aid in producing higher quality citrus fruit?

To find the answer to these questions several experiments have been carried on in various citrus groves in the south. These groves have been using the standard fertilisation programme of nitrates and manures for a number of years.

These potash experiments were started three years ago, all on mature trees. From about 35 to 50 trees were selected for the test plot, of the same uniform size as the check trees and on the same type of soil. The whole grove received the regular nitrate-manure fertiliser programme that it had been using for years. In addition the potash test plot received 8 lbs. of sulphate of ammonia, equivalent to 4 lbs. of actual potash per tree, every year. The potash was applied in irrigation furrows during the winter season.

The first two years no check was made to note if quality had "stepped up" in the potash plots. In the third year, however, a check was made.

An accurate check was made at the packing plant of the grades of the fruit from the potash plots so that they could be compared against the grades from the rest of the grove. Here are the results as recorded at the packing plant:—

On Valencia Oranges the fruit from 44 trees of the potash plot totalled 213 packed boxes. Of these 182 boxes were extra choice fruit. In comparison the fruit from 44 trees of the check plot totalled 162 packed boxes and only 136 boxes were extra choice.

On Lemons the fruit from 36 trees from the potash plot totalled 212 packed boxes. Of these 24 boxes were "Light Greens" and 67 "Silvers," both top grades. In comparison the fruit from 36 trees from the check plot totalled 197 packed boxes. Of these we find only 14 boxes of "Light Greens" and 39 boxes of "Silvers." In other words 43 per cent. of the Lemons packed out top grades on the potash plot and only 27 per cent. packed out top grades from the check plot.

A similar result was noted on another grove on which potash experiments had been carried out.

The packing house record showed that 70 per cent. of the Valencia Oranges from the potash plot packed out top grades against only 64 per cent. on the check plot. The average weight of a packed box from the potash plot was about 77⅛ lbs.—that from the check plot only 74⅛ pounds. In the loose fruit pack there was an increase of 24 per cent. in the largest grade in the potash plot over the check plot!

FRUIT DRINKS WITH MILK.

A new machine designed for mixing fruit flavors with milk is reported by the Trafalgar (Vic.) Milk Supply Pty. Ltd. The new drink will be known as "Milk Champagne." This is one of several new units being installed by the company.

BARNEY SPRINGER

Fruit Importer And Salesman

All Business Under Personal Supervision .. of .. Mr. Barney Springer assisted by his Five Sons

Every Attention Guaranteed

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References:— National Bank of Australasia Ltd., Hobart.

Tasmanian Agent:— H. CLAUDE LITTLE, 85a Collins Street, Hobart, Tasmania.

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Ample stocks available. And remember . . . behind every Goodman Tree stands 46 years' experience as Nurserymen, which results in clean, healthy, well-grown trees, of best marketable varieties, careful handling in digging, grading and packing and proper protection in delivery.

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Prompt despatch, any distance. Catalogue post free on request.

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PICNIC POINT NURSERIES BAIRNSDALE - VICTORIA

South Australia.

Tree and Vine Pruning Competitions — Importance of Cover Crops — Successful Co-operatives — Suggested Cure for "Dieback" in Pears — No Dislocation of Trade this Season, Despite Adverse Privy Council Decision.

(By Our Special Correspondent.)

Renmark, July 18, 1936.

PRUNING OPERATIONS are in full swing, and on every block can be seen busy pruners at work. Every year, the competitions in pruning take place in local areas, under the patronage of the Agricultural Bureau. Each locality conducts its individual competition in the pruning of Pear trees, Apricot and Peach, which are the only varieties grown to any extent commercially in the River areas.

The vine section embraces only Currants, Sultanas and Gordos, as these varieties have distinct pruning differences, and furthermore, constitute the largest areas of production in the irrigation communities.

Every local area is allowed the three competitors who obtain the highest number of points in the local competition in the vine section and three competitors for the vine section to take part in the championship, which is held in one of the competing areas, and changes place from year to year.

This naturally creates a great deal of interest during the holding of the local competitions, as the honor of being allowed to compete in the championship is eagerly looked forward to. This year the championship was held at Mypolonga, and to give some idea of the keenness of competitors, it may be stated that the Berri and Barmera competitors were obliged to travel over a hundred and fifty miles to compete. Great interest was shown by over 100 growers in following the methods adopted by the competitors and watching every cut made on vines and trees.

Competitors from five settlements took part in the finals, the results being as follows:—

Tree Section.	Apricot.	Peach.	Pear.	Total.
A. Wedd (Mypolonga)	88	92	85	265
W. Harris (Berri)	88	89	87	264
A. Wilde (Mypolonga)	87	90	86	263
C. Curtis (Waikerie)	87	88	87	262
E. Prosser (Mypolonga)	86	89	87	262
F. Battams (Moorook)	90	88	84	262
R. Loxton (Moorook)	89	89	84	262
R. Andrew (Waikerie)	84	82	90	256
E. Rout (Berri)	84	84	87	255
G. Elliot (Waikerie)	84	85	84	253
J. Robertson (Berri)	86	80	85	249

Vine Section.	Gordo.	Currant.	Sultana.	Total.
J. Boehm (Waikerie)	92	89	106	287
A. Wilde (Mypolonga)	90	88	106	284
N. Walters (Waikerie)	90	87	106	283
F. Fox (Berri)	88	86	108	282
R. Loxton (Moorook)	90	88	104	282
C. Boehm (Waikerie)	88	92	101	281
W. Harris (Berri)	91	92	98	281
E. Liddicut (Moorook)	91	90	99	280
F. Battams (Moorook)	89	85	104	278
J. Robertson (Berri)	88	86	104	277
C. Kruger (Mypolonga)	90	82	102	274
W. Penny (Burncon)	87	83	102	272

The grand aggregate was won by A. Wilde, of Mypolonga, with a total of 547, closely followed by W. Harris (Berri), with a grand total of 545, while the trophy for the Vine Section goes to J. Boehm, of Waikerie, and the winner of the Tree Section being A. Wedd, of Mypolonga. Mr. E. Leishman (District Horticultural Instructor) acted as judge for the competition, and had as assistants Mr. L. W. Andrew, of Waikerie, and Messrs. Noel and Edson, of Mypolonga.

The winner of the grand aggregate Mr. A. Wilde, was presented with a trophy, kindly donated by the State Dried Fruits Board, and the presentation was made by Mr. C. Till, a member of the Board. Other members of the Board who attended and showed a great interest in the competition were Messrs. H. Crawford, C. R. Russell, J. B. Murdoch and the Secretary, Mr. W. V. Twiss; Mr. Rodney Fowler (manager of the Blackwood Experimental Orchard) also attended.

Mr. J. J. Odgers, Secretary for the championship competition, announced that trophies would be awarded to the winners of the highest aggregate in tree and vine sections (Messrs. A. Wedd and J. Boehm) by the Royal Agricultural and Horticultural Society.

In the evening, a social and dance was held in the Mypolonga Institute, and prizes for the local competitions were presented to the winners.

Some very

Nice Cover Crops

can be seen in our area at present, although the success of this year's cover crop is to a great extent governed by a good deal of luck. Those planted in late March suffered by a prolonged dry spell in April, and became stunted, and were attacked by Black Aphis. But the later plantings were fortunate in getting enough rain, following irrigation, to carry them on without a break of any kind, and consequently they now stand about 4 ft. in height and are showing signs of coming into flower.

Tick Beans have almost completely taken the place of cow Peas as a cover crop, both for the amount of bulk matter they produce and the quantity of nitrates contained in their roots. Our river soils are particularly deficient in nitrates, and the building up of our soil nitrates by means of growing leguminous cover crops has given very tangible results.

It has been found that artificial fertilisers alone are not wholly satisfactory, and one grower after another has slowly adopted the practice of planting a yearly cover crop. The benefit to be derived by this practice does not come with any dramatic suddenness, but comes very gradually, **and it is not until about the third cover crop has been incorporated in the soil that an increase in crop return takes place.**

There is, however, a marked improvement in the general appearance of the foliage of the vines after the break down of the first good cover crop, the effect is also noticeable by the greater moisture holding capacity of the soil during a very hot spell. In short, it is difficult to estimate the monetary value which has resulted in the adoption of the practice of growing a yearly cover crop.

It is being increasingly realised that cover crops must not be allowed to grow while the young vine shoots are coming out, but should be put in at a time when maturity will be reached well before bud burst.

A few years ago, growers vied with each other to get the highest crop, and while some were over 6 ft. high, they only attained this height by allowing them to grow until October. A late frost came along, and caused considerable damage to the vines where cover crop stood trellis high. They have now learned their lesson.

Successful Co-operatives.

Possibly there is no locality anywhere in Australia where the community spirit is more strongly in evidence that in the Irrigation areas. The spirit of co-operation seems to have been given birth in Renmark. and Mildura at a time when the failure of the Chaffey Bros. necessitated the creation of a body of elected grower representatives to administer the distribution of water, levy rates to defray overhead costs, and carry out various municipal acts. Just as the smooth working in the distribution of water depends upon the co-operative effort on the part of each individual grower during an irrigation, so does the effective distribution of our products depend on a strong co-operative movement, and it is perhaps no exaggeration to say that the strongest form of co-operation among primary producers in Australia can be found on the Irrigation areas.

Not only does the greatest tonnage of dried fruits pass through co-operative channels of distribution, but the buying of growers and packing shed requisites is handled in bulk by the "Murray Wholesale," a buying institution representative of all co-operative interests. Buying in large quantities enables growers' costs to be reduced to a minimum. As the River irrigation areas are the home of effective co-operation, the community spirit is in strong evidence in the individual also. In the last few weeks there have been no fewer than three "working bees" to help needy growers.

In one instance, word was passed around that a grower had contracted paralysis of the spine, and over 40 fellow men turned up with secateurs and almost completely finished his pruning in a day. Ladies from the vicinity of the block provided morning tea, and the whole proceedings passed off with good-natured banter emanating from a spirit of willing help.

Other cases in past years have led to helping needy widows with sometimes a whole year's work, to enable her to strengthen her financial position sufficiently to enable her to engage labor.

In most cases of this kind the help is towards assisting the widow of a returned soldier or one of their members in distress, and the work is carried out through their own organisation, with the cordial help from civilian growers.

Cure for Pear "Dieback."

A grower (Mr. J. Ritchie, of Renmark) came to me a few days ago, and claims to have found a cure of "Dieback" in Pear trees. For some time, he said, his Pears had commenced dying at the terminals of leaders, and if cut back they died still further back. By stripping the laterals for a couple of feet from the end, he found that they threw fresh leaders, one of which was eventually selected for fresh spur furnishing. Trees which developed "Dieback" were usually a type covered with fruiting spurs, and according to Mr. Ritchie's theory, the sap flow in early Spring being pushed up by the roots at a rapid rate, could not return through the ordinary channels quickly enough, and was consequently dammed up at the terminals. The theory is interesting, and as his treatment has effectively checked the evil, I would be interested to hear whether any other grower having trees suffering from

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"Dieback" would try Mr. Ritchie's remedy and could let me know the result.

The Privy Council Case.

Word has just been received that the appeal by James v. Dried Fruits Board has been upheld by the Privy Council, and consequently Section 92 of the Commonwealth Constitution, as now interpreted, has upset the present control acts, which have governed the distribution of dried fruits for the past ten years. It is hoped that a Referendum will shortly take place on the matter of an alteration to the Constitution.

It seems an anomaly to think that an act which was brought into force for the purpose of enabling each individual grower of dried fruits to share equally in all markets available, has been wrecked by a trader, whose business lies in the profitable buying and selling of this commodity. There should be a Referendum for the purpose of an alteration in the Commonwealth Constitution, which is to benefit the primary producer, and although the Apple grower will not be affected by the issue. I would like to appeal to all primary producers to put their weight behind the Referendum and help to press it, as it is of vital concern to the dairying and dried fruits industry.

There is not any likelihood of an immediate dislocation of the channels of distribution for this season, as arrangements have been made whereby this crop can be disposed of through ordinary trading channels.

In the event of the Referendum not being carried, an alternative scheme has been evolved by the various executives of the dried fruits industry and submitted to the Commonwealth Government. Although the alternative scheme would not be quite so effective as that which is now in force, it would nevertheless prevent the wrecking of an organisation which has been of incalculable benefit to the man on the land who produces dried fruits.

—"Nemo."

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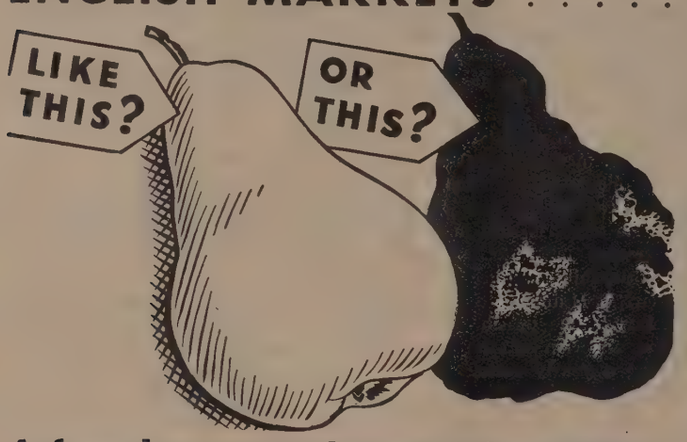

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The slight additional cost in reaching London markets is altogether outweighed by the tremendous advantages of days saved.
Deterioration is avoided by special arrangements for sorting to mark, and quick refrigerated trains direct to London.
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PEACH GROWING

Rootstocks ∴ Pruning ∴ Cultivation
Experiences in South Australia

AT A FIELD DAY held recently at the Blackwood Experiment Orchard, South Australia, information was disseminated on many phases of fruit growing.

Rootstocks for Peaches.

An abstract of an article by Mr. Geo. Quinn, stated as follows:—

The influence of six seedling rootstocks, viz.: Almond (2), Myrobalan Plum, Peach, Apricot, and Peach x Almond was examined in this trial. Two trees of each variety on four stocks, and one of each on the other two were planted out in 1910. The top soil of the plot is shallow, somewhat impoverished, and rather heavy in texture. During the trial, the trees received standard pruning, and cultural treatments, but no manure. By 1930, when 20 years old, many of the trees were deteriorating, and the whole lot were grubbed. During the period of the test crop, records were taken, the fruit being classed into two grades.

Of the rootstocks, two Myrobalana Plum and Apricot gave very poor crop results in almost every case. One interesting exception, however, was Salwey on Myrobalana, one tree of which was very vigorous, and cropped exceptionally heavily, though the other was stunted, and bore practically no fruit. The yield figures for the remaining four stocks vary in order very greatly for each variety.

The data produced in the grade records provide some evidence in support of the popular contention that the percentage of first-grade fruit tends to be in inverse proportion to the yield. There seems to be no indication, however, that this is sufficiently marked to outweigh the advantages of heavy cropping.

If any conclusion may be drawn from this limited trial, it is that none of the species or varieties of the genus Prunus tested are likely to supersede the Peach seedling as a rootstock for Peaches.

Peach Pruning Trials.

The objective of these trials has been to determine the comparative value of pruning Peach trees during their dormant period, as generally practised, and pruning them whilst in a state of vegetative activity, and also to determine whether the general practice of pruning Peaches in the winter season only, is the most desirable to adopt, or whether better results may be obtained by performing pruning operations at the other season of the year.

The plots were planted in 1910, and consisted of four Peach varieties, viz.: Early Crawford, Lady Palmerston, Brigg's Red May, and Elberta. Two trees of each were pruned in winter; winter and summer; and summer only. Crop data has been recorded for 20 years.

Early Crawford and Lady Palmerston appear to respond best to winter pruning, while Brigg's Red May and Elberta have given some indication of better cropping under summer pruning.

Where summer pruning resulted in heavier crops, the benefit was somewhat discounted by the fact that the percentage of second-grade fruit was always considerably higher than under other treatments. Winter pruning invariably gave the highest ratio of first grade fruit. The trees in this test have reached an age when no further information of value can be expected from them, and, in fact, the small number of trees under various treatments render the results difficult of confident interpretation.

Tests to Determine the Effect of Digging or Deep Ploughing Close to Fruit Trees while in Full Bloom.

Experimental material consisted of 36 trees of Elberta Peach, and 36 trees of three varieties of Apples.

The whole area was shallow ploughed early in September, the first three furrows from the trunks of the trees to 3-in. only, and the remaining interspaces to 5-inch. Later, in the same month, when the Peaches were in full bloom, the land around each alternate tree was roughly and deeply forked to about 8 inches.

Many small fibrous roots were broken, and in some cases clay subsoil was brought to the surface. Similar treatment was meted out to alternate Apple trees between the second and third week in October, just as each variety came into full bloom.

The ensuing growing period was unusually dry, but no apparent growth differences between treated and untreated trees were recorded. Likewise, no significant difference was found in cropping between trees under different treatment.

"It can't be done," murmured the young lady.

"What can't be done?" asked the cop, who was pulling her out of the wrecked car.

"Lighting a cigarette, using a lipstick, and driving the car at the same time, she sighed."

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VICTORIA

Fruit Growing in the Goulburn Valley

EARLY HISTORY — DEVELOPMENT OF CANNERIES — EFFECT OF HEAVY PLANTINGS — IMPORTANCE OF SUGAR CONCESSION.

(Address by Mr. W. Young, President Northern Victoria Fruitgrowers' Association at recent Annual Meeting of Orchardists and Cool Stores' Association at Shepparton.)

AN INTERESTING ADDRESS dealing with the history and development of the fruitgrowing industry in the Goulburn Valley was delivered by Mr. W. Young, President, Northern Victoria Fruitgrowers' Association, before the recent annual meeting of the Orchardists and Fruit Cool Stores' Association at Shepparton.

It was pleasing to observe, stated Mr. Young, that the Northern Victoria Fruitgrowers' Association had been held up as an example of effective organisation. This Association was quite successful, but it has taken many years to bring it to its present stage of efficiency.

The membership consisted of 700 growers grouped into nine district Associations, with a central executive of four members. There were only about half a dozen growers outside the Association.

At one stage finance was obtained by a small sum per acre, but this was found difficult to collect, and the system was altered to that of a levy on all the fruit sent to the canneries. The canneries deducted the levies and handed the money over to the Association, which was now amply financed, the credit balance was over £1,000.

Developments in the fruit industry in the Goulburn Valley had been brought about by a process of trial and error. A commencement was made in 1884, when orchards were planted at Ardmona—the first effective irrigation settlement in Victoria, the Ardmona settlement was commenced before Mildura. In 1887 tenders were let for the Goulburn Weir at a cost of £90,000, and by 1890 the system was in operation. Previous to this, water was pumped from the Goulburn river.

Vines were at first largely grown at Ardmona, but great damage was wrought by phylloxera, and the vineyards had to be re-constituted on phylloxera resistant stocks.

Apples were also grown for export 30 years ago, but the codlin moth was bad, and few Apples were now grown in these irrigation districts.

A third start was made in the growing of **Apricots, Peaches and Pears**—mostly for the local market. But this market was not profitable, and a trade was developed with Sydney: this revolutionised the industry. The Peach varieties included Brigg's Red May, High's Early Canada and Crawford. There was a gradual falling off, however, as the fruit did not carry too well. Pears, however, were still sent.

Then the

Canning of Fruit

came into prominence. From a beginning with three quarters of a million cans, the trade has grown to over 50 million cans.

At first Freestone Peaches were grown; Elberta, Foster, Early Crawford and the like. The Elberta was grown very largely, but now canneries will not take them as a gift.

Now the Clingstone canning varieties had been cut down to six varieties.

In 1920 the Government commenced its policy of soldier settlement, and the production of canning Peaches quickly overtook the demand. The first fruit pool was established, in which, of course, the southern growers were equally interested. The Northern Victoria Fruitgrowers' Association was established about this time.

Without the establishment of these fruit pools the industry would have collapsed. Then came the enquiry into the sugar industry, and the sum of £216,000 was set aside for the benefit of the fruit industry. This Fruit Industry Sugar Concession Committee had done good work—one provision being that the canners must pay a fixed price for the fruit before being able to get the benefit of the Sugar Concession.

The gross value of canning fruit exported from the Goulburn Valley was now over £1,000,000 annually. Large sums of money were paid in wages to cannery employees; a lot for tins, boxes, equipment and in railway freight.

With regard to Apricot varieties, the Moorpark was once largely grown, but the Trevatt and Tilton were the only varieties desired now. With Pears the production for canning was practically limited to one variety, Williams Bon Chretien. There were now 2,388 acres of this variety in bearing, with 609 acres, under 6 years, yet to come into bearing.

Pear Export.

Another feature has since developed, continued Mr. Young, namely, the growing of Pears for export.

For export Pears, 100,000 cases were sent overseas in 1936 from 370 acres, and there were yet 942 acres under six years to come into bearing. The principal varieties were Packhams and Josephine.

Research Work Needed.

Research work was urgently needed. One fact was outstanding, namely, that growers were not harvesting anything like the tonnage per acre secured in other parts of the world. The Californian production was twice as great per acre as compared with ours. Probably their soil was better, but we have to work on the land which is here, and experiments were needed so that growers could get the maximum tonnage per acre. In this connection

Vigorous W.B.C. Pear trees in Mr. J. D. Simson's orchard, Ardmona, Vic.

the northern growers were fully sympathetic with the southern growers, and recognised the need of an experimental orchard there to help solve their problems.

The Oriental Peach Moth was a serious pest. The grub was very similar to that of the Codlin Moth, but this Peach Moth Grub was what might be termed an "educated" codlin, as it could not be poisoned, owing to its power of spitting out the first few mouthfuls of fruit. Arsenate of lead was therefore useless, as the grub could eject any poison and could eat its way uninterruptedly into the fruit.

The C.S.I.R. and the State Department of Agriculture were active, and attempts were being made to liberate quantities of a parasite.

In proposing a vote of thanks to the lecturer, Mr. J. H. Lang, Harcourt, said, "Hats off to the northern grow-

SOUTH AUSTRALIA—(Continued).

BLACKWOOD COOL STORE

We recently had the opportunity of inspecting the cool stores at Blackwood (S.A.). Previously known as the Blackwood Co-operative Cool Store, this store is now owned by the Sturt Producers' Society Ltd., and it is one of the most up-to-date cool stores in South Australia.

At the present time there is accommodation for 18,000 cases of fruit and provision is available to extend to a further 6,000. The three chambers can store 6,000 cases each. This store was rebuilt recently, and many up-to-date provisions were included. It is situated alongside the Blackwood Railway Station, and there is ample loading space all round the store.

With a view to making full use of the space available, a floor was placed on top of the cool chambers with an area of 100 ft. x 50 ft. This provides ample accommodation for storing cases, making cases, and is also used for other purposes during the busy season. The packing floor, which is alongside the cool store chambers, all under the same roof, has an area of 100 ft. x 46 ft. Concrete floors provide excellent working conditions.

The machinery in the cool store is electrically driven, and a special room has been built for Pears, with hot water coils which enables the temperature of the room to be brought up to 60 degrees.

We were also interested in seeing the "Oxlo" fruit grader working. All fruit is graded by weight. Before passing to the grader the fruit is placed on conveyors and is washed by means of jets, which spray direct on to the fruit. During the last season the Sturt Producers' Society exported 18,000 cases of Apples and 2,000 cases of Pears. The main varieties of Apples handled here include Jonathans, Cleos., Dunns and Romes.

The directors of the Society are Messrs. M. L. Lewis (Chairman), A. K. Ashby, M. G. Basey, L. R. Tune, and J. H. Mellor. Mr. Fletcher-James occupies the dual position of managing secretary and engineer.

How much POTASH for Apples?

"I use a complete fertiliser — 3 lbs. per tree — so my apples get a little potash!" A remark frequently heard — but how misguided!

An official trial recently concluded in U.S.A. gave conclusive proof that *"a little" is not enough.* On standard apples uniformly treated with 3 cwt. of super and 1½ cwt. of nitrate of soda, potash was applied at varying weights with the results shown:

Muriate of Potash per acre.	*Acre value of fruit less cost of potash.*
30 lbs.	£181-12-0
60 lbs.	£222-18-0
100 lbs.	£257-16-0
150 lbs.	**£389-18-0**

Full grown trees need the potash contained in 10 lbs. per tree of 2:2:1 (W.A. "Special K"). For smaller or for extra large trees, use less or more.

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ers for their effective organising work." He understood the Harcourt settlement commenced in 1884 was older than Ardmona. Regarding the Sugar Concession, however, there were still some abuses to be corrected; for instance, Plum growers were not receiving their full prices, because the fruit was bought by "pulpers," who did not need sugar. The pulp subsequently found its way to the jam factories.

In reply, Mr. Young said that pulpers had to sign a statutory declaration that they had paid full prices to the growers. If there were any abuses in this, it was up to the growers to furnish full details to the Sugar Concession Committee. Without positive evidence of sale at below schedule prices it was impossible to take any effective action.

The resolution of appreciation to Mr. Young was carried with acclamation.

EXPERIMENTAL ORCHARD FOR THE GOULBURN VALLEY.

Work to Commence at Tatura.

Important Decision by Victorian Government.

THE ESTABLISHMENT of an experimental orchard at Tatura at a total cost of between £7,000 and £8,000 has been decided upon by the Victorian Government.

An area of 104 acres at Tatura was purchased n 1929 by the McPherson Government, but the project has so far remained undeveloped.

The Premier (Mr. Dunstan) stated that towards the establishment of the institution £1,500 would be included in the Estimates for 1936-7. All classes of experiments pertaining to the fruit industry and the pests affecting it would be carried out. To some extent the equipment of this farm would meet the requests that had been made from time to time for the establishment of a State Agricultural College in the northern part of the State.

VICTORIAN FRUIT CROPS.

Seasonal Report for the Month of June, 1936.

IN THE MONTHLY REPORT received from the Department of Agriculture early in July, the following is stated:—

Horticulture.

Now that export of fresh fruit has ceased, growers are turning their attention to seasonal work.

From almost every district it is reported that fruit trees are in good heart, and have every appearance of

Carrying Good Crops

of fruit next season.

In the **Harcourt** district the growth made last season was very satisfactory, particularly on Apple and Pear trees.

In the **Burwood** and **Eastern** districts the buds of all varieties continue to show good promise, and a heavy blossoming is anticipated.

The same conditions are prevailing in the **Geelong** district and also at **Bacchus Marsh.**

In many districts orchardists are paying attention to

Orchard Hygiene,

and in some places coppers have been built in for dipping fruit in order to cope with the codlin moth.

Eggs of the Peach aphis are showing in Doncaster as well as in northern districts, and growers are spraying for this pest. Severe frosts have been experienced in both Mildura and Swan Hill districts. In both places very successful efforts have been carried out to combat injury to crops.

About 75 per cent. of the Navel crop of Mildura has been marketed, and quite a number of second crop fruits are showing up of both Washington Navels and Valencia Late. In the Swan Hill district the Navels are slow in ripening, but the fruit is of very fine quality. One record has been reported where a grower at Long Lake, whose grove produced 500 bushels last year, has produced 3,000 this year.

Planting is taking place in the Mildura and adjacent districts, where about 6,000 trees have been ordered, the majority of these being Valencia Late.

In the deciduous areas of the Swan Hill district, more planting of **Almond** and early **Apricots** and **Peaches** will take place.

Viticulture.

In the irrigated areas, the recent rains have developed some very fine cover crops. Ditches for the burial of cuttings is fairly general, and the spreading of gypsum and the collection of sheep and stable manure from adjoining farming areas is going on.

A certain amount of table Grape planting is going on in the Swan Hill district.

At Mildura a preliminary frost control test was conducted with satisfactory results by the A.D.F.A. Frost Committee, assisted by officers of the Merebein Research Farm. Further tests are to be made to show the minimum number of burners necessary per acre and cost.

The pruning wood this year on vines is robust and plentiful, except in a few cases where the canes have been badly pitted owing to black spot last season.

In the non-irrigated areas there are vines 70 years old, and several growers are adopting the practice of removing a fraction of their area of old vines each year and refreshing the ground with several green crops prior to replanting.

FIELD DAY AT PAKENHAM.

AT the fifth Annual Field Day held at Mr. J. J. Ahern's orchard, Pakenham, under the auspices of the V.F.M.A. and the Gippsland Fruit Marketing Association, there was in attendance of nearly 200 growers, who came from the surrounding districts such as Narre Warren, Beaconsfield, and also Ringwood, Drouin, Harcourt and elsewhere.

There were demonstrations of pruning by Messrs. F. Kennedy, A. Kennedy, T. Fuller, W. R. McKinlay, A. Apted and others. Mr. D. C. Black demonstrated a new method of top working fruit trees.

Mr. Ahern's orchard was observed to be in good heart, also that the grafting over of varieties to Granny Smith on the bark grafting system had been successful.

Mr. Ahern, in introducing Mr. F. M. Read, Chief Inspector of Horticulture, to give an address on topics of current interest, spoke most appreciatively of Mr. Read's services to the fruit industry.

Mr. Read spoke on soil fertility (see report elsewhere in this issue). The Victorian portion of the Federal Research Grant for the Apple and Pear industry was being utilised in manurial and spraying tests. Demonstration plots were being laid down at Mr. D. Grant's property, Drouin, and at Messrs. Woolf's at Upper Pakenham; also at other centres throughout the State. For Apple trees the value of using a balanced fertiliser (2 : 2 : 1), and the regular turning under of green crops on Mr. Walter Brown's property at Upper Beaconsfield had proved the commercial value of this programme. The manure should be broadcast and ploughed under three or four weeks before blossom time.

Spraying for codlin moth and black spot, continued Mr. Read, would also be carried out under controlled conditions. Growers were urged to take an active interest in this research work.

Mr. L. J. Provan, M.Ag.Sc., Horticultural Research Officer, stated that the Department's recommended spraying programme for control of black spot and codlin moth would be issued very shortly. Good results had been achieved with three sprayings with arsenate of lead before Christmas, and oil sprays subsequently. The fertiliser trials would be replicated several times to check results. The Department was carrying out this Research work in the main Apple and Pear growing districts of the State, and growers would have every opportunity of inspecting the results.

A hearty vote of thanks to the speakers was carried at the instance of Mr. W. H. Carne.

VICTORIAN FRUIT MARKETING ASSOCIATION.

Monthly Meeting.

At the July meeting of the Executive of the V.F.M.A. there were present Messrs. W. H. Carne (Chairman), J. B. Mills, F. Moore, J. J. Tully, W. Young, W. A. Thiele, S. Brown, G. Douglas, K. Eagle, H. M. McLean, F. R. Mellor, H. G. Sprague, C. H. Jost, J. M. Ward and F. M. Read (Department of Agriculture), F. G. Beet (President, the Southern Fruit Growers' Association), and the Secretary, R. E. Boardman.

Grading Regulations. — Messrs. Moore and Hutchinson reported re Interstate Conference at Sydney on Apple and Pear grading regulations (see report elsewhere in this issue). It was stated that a recent shipment of Victorian Apples was very inferior, being infested with Codlin Moth and serious Black Spot. Some was condemned, others "de-graded." Tasmanian fruit (inspected prior to shipment) was much superior. Because of this inferior fruit being present, the delivery of the whole shipment, including, of course, the good fruit, was seriously delayed, causing loss to growers.

The N.S.W. Chamber of Fruit and Vegetable Industries wrote giving details of the arrival of inferior Apples from Victoria and losses occasioned thereby.

It was decided to adopt the grades as decided by the Conference.

It was recognised that by the rigid enforcement of these grades in both N.S.W. and Victoria, much inferior fruit will be rejected by inspectors.

Mr. Carne reported re successful field day at Pakenham.

There was much discussion re compensation to growers on whose properties research work was being conducted.

The standardisation of wearing parts of agricultural machinery was approved.

Mr. S. Brown brought forward the matter of a Federal Relief Grant to growers because of the disastrous prices in U.K. this season.

Mr. J. B. Mills stated that as President of the Australian Apple and Pear Export Council he had already made an approach to the Prime Minister on this subject.

The resignation of Mr. J. W. Bailey was accepted with regret, and it was decided to write thanking him for past services.

It was decided to hold a Field Day at the orchard of Mr. F. G. Beet, Vermont, on October 1.

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The Most Extensive Manufacturers in the British Empire of

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Stencils, Marking Devices, Inks & Acme Stamp Pads.

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'Esco House," 50-52 Victoria St., WELLINGTON, N.Z.

WANTED

Apple and Pear Orchard, 1,520 acres on lease or shares, or position as manager—Advertiser fully qualified all branches.

"Jonathan," C/o "Fruit World," Box 1095, G.P.O., Melbourne.

TASMANIA

Meeting of State Fruit Board — Losses on Export Cause Much Concern — Efforts to Improve Marketing in Sydney — Enlarged Powers Sought for Board — Licensing of Agents Proposed — Claims for Faulty Shipments — Request for Bounty on 1936 Exports.

A MEETING of the Tasmanian State Fruit Board was held at Hobart on July 21 and 22. There were present Messrs. C. O. Smith (Chairman), W. H. Calvert, M.L.C., R. Thompson, J. H. Astell, J. R. Abel, D. Ryan, B. M. Clark, L. Taylor, E. Norris and the Secretary, A. J. Honey.

Sydney Market.

Mr. Abel gave details of the Conference held at the rooms of the N.S.W. Chamber of Fruit and Vegetable Industries, Sydney, when the formation of a Fruit Industry Interstate Consultative Committee had been recommended (see details elsewhere in this issue).

The report was adopted.

Grading Regulations.

Messrs. Smith, Taylor and Abel gave details of the Conference on Interstate grading regulations for Apples and Pears. Tasmanian delegates had stood firmly for high standards for the Sydney market; they had made it clear that Tasmania would not contribute to an advertising fund while the Sydney market was being flooded with inferior Apples from Victoria.

Agents' Licences.

On the motion of Messrs. Ryan and Abel it was decided to request the introduction of legislation for the licensing of all agents handling Tasmanian fruit for export, and that such agents be compelled to keep trust accounts, and to take out fidelity bonds for substantial amounts.

Enlarged Powers Sought.

The need for wider powers for the State Fruit Board was stressed by Mr. Ryan, including the shipping and marketing of fruit.

It was decided to refer this matter to the Minister for Agriculture, also as to powers for the Board to charter vessels for the Interstate trade, and to guarantee freights.

In reply, the Minister (Mr. Cosgrove) stated amendments were being included in the Act to give the Board enlarged powers. It was essential, he said, that any decisions arrived at, on a poll of the growers, should be binding on all growers. The Board was asked to submit the amendments it desired.

Claims for Faulty Shipments.

The Chairman stated that the Acting Agent-General had been advised that the Defence Fund would be made available to pursue claims for faulty deliveries, ex "Raranga," and a reply had been received from him stating he was informed the shipping company was paying 75 per cent. of the loss sustained, compared with the sound value of the fruit.

It was decided to advise the Acting Agent-General that the Defence Fund was available for the prosecuting of claims for alleged faulty carriage on other steamers, viz., "Jervis Bay," "Napier Star," "Bendigo," "Viking Star," and others.

Severe Export Losses.

Much time was devoted to the consideration of problems arising out of the disastrous prices in the U.K. this season. Mr. E. Brooker, M.H.A., addressed the Board, pointing out the urgent need of affording financial relief to growers in the Cygnet district.

Several delegates pointed out the situation was so serious that unless immediate relief were afforded, growers would be forced off their properties.

Mr. W. H. Calvert, M.L.C., took the view that many who were now growing fruit were not fitted for this occupation. Some had squandered previous relief grants; he would like to see a classification method, by which deserving growers could be assisted.

It was finally decided to approach the State Government requesting assistance to those growers who shipped this year less than 50 per cent. of their average of previous 3 years.

Federal Grant.

The Secretary, Mr. Honey, stated that last year's grant, totalling £43,176, had been apportioned, and 1,850 claims had been lodged with the State Treasury, with particulars for payment of the grant.

A report was presented giving particulars of the deputation to the Prime Minister, at Devonport recently, when a bounty for 1936 was requested, owing to the unsatisfactory prices of fruit sent overseas this season. The request to Mr. Lyons had been that the grant should be sufficient to provide a payable price to the growers. It was decided to prepare a detailed statement for submission to the Prime Minister, a copy to be sent to the Australian Apple and Pear Export Council.

Finance.

The balance-sheet to June 30 showed a credit of £900. On the receipts side the entry of £2,643 was made up principally of refund from Apple and Pear Export Council, £1,361, and income from Acreage Tax, £1,281.

SEASONABLE ORCHARD NOTES.

Pruning :: "Dieback."

Hobart, July 7.

A summary of information received by the Chief Horticulturist (Mr. P. H. Thomas) from the District Orchard Inspectors follows, together with other information relevant to the fruit industry.

Throughout the orcharding areas rainfall has been generally below average for the month, recordings from representative centres being as follows:—Hobart 214, Franklin 179, Launceston 171, as compared with the respective averages of 211, 345, and 325 points. Temperatures were also below average, and the numerous frosts experienced rapidly defoliated trees, as well as discouraging growth in cover crops.

Pruning.

The dry conditions have enabled growers to concentrate on pruning, and in a number of orchards this has already been completed. With the increasing importance attached to color grading, the advisability of bringing the fruit out on the laterals cannot be over-stressed; by this simple specific not only will fruit obtain considerably more light and air, but excessive growth and the forced resort to summer pruning will be eliminated.

Another advantage of increasing importance is the reduction of injury by the Light Brown Apple Moth, for it is well known that clustered fruit forms an excellent base for the foraging operation of this and other pests.

"Dieback."

Since last month a number of growers have availed themselves of the formulae for the wound protectives and disinfectants recommended in last month's "Orchard Notes," and it is hoped that a general attack will be made to prevent spread and injury from this fungal organism. Neglected orchards containing old and injured trees form ideal centres for the extension and spread of "dieback," as well as many other pests, and any grower knowing of such should regard it as their duty to the fruit growing industry as a whole, to report the matter to the Department. Last year a fair acreage of unproductive orchard was cut down as a preliminary to complete removal.

As soon as soil conditions are suitable, these stumps should be [illegible] bed by means of tractors or horses, and burnt or dried out for firewood. If left for any length of time, Armillaria and Polystictus are certain to take charge and spread to adjoining areas during the growing season, particularly where [illegible]ting and reworking has been done.

Codlin Moth.

The removal of bandages, their treatment and general de[illegible]ion of pupae continues in most areas, whilst more attention is being given to the scraping of trees and removal of loose bark than for some years.

Spraying.

Although this important operation does not commence in earnest until next month, now is the time to overhaul pumps, hoses, lances and nozzles, and get everything ship-shape. Too often growers find that the pump which completes the January sprays in apparently first-class order, breaks down on the first spring round, causing inconvenience and financial loss. Estimates and orders for the requisite spray materials should also be put through now.

From enquiries received at the Department it is evident that

Tar-Distilled Sprays

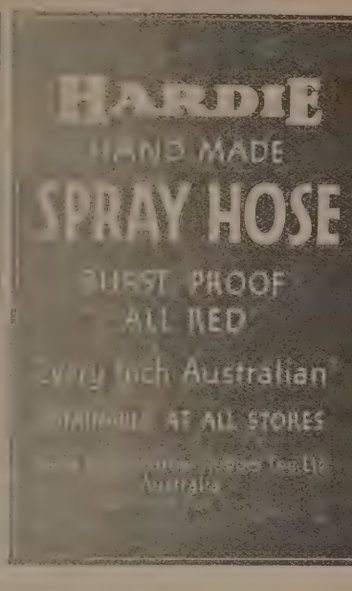
may receive more consideration than in previous seasons, and a few remarks concerning their use may not be out of place. Firstly, it has been shown that they must be applied only when the trees are perfectly dormant, or injury may result. The strengths vary from about one in twenty-five to as strong as one in fifteen, and may exercise much the same control as prepared oils of similar strengths.

Operators are advised, however, to protect their faces well with vaseline or even use improvised masks, with provision for protection of the eyes.

Tar-distillates on Peach trees have proved very satisfactory, and have been used extensively in this connection on the mainland.

Reworking Fruit Trees.

It is probable that reworking will be carried out almost as extensively this season as last, and growers when pruning should save good scion wood of the desired varieties, and either heel this in a moist situation protected from the sun, or place in cool store until required.



In regard to the wood saved, no only should this be free from spo or mildew lesions, but a careful ex amination must be made to ensur that the scions are reasonably fre from woolly aphis, red spider egg and the eggs of the Canary fly. Th presence of the latter may be ascer tained by small sausage-like swelling on the bark, and only distinguishab upon close inspection. As the egg are inserted beneath the bark, no ou ward treatment will produce much e fect. Those growers desirous of a sistance and advice in refurnishin methods, or of suitable scions in th different varieties, should commun cate with the Department, or direct with the Orchard Inspector station in their particular district.

Packing Classes Appreciated.

These have been continued regularl throughout the month, and the pupi have shown keenness and an all-rou improvement generally.

7/7/36.

Mr. P. H. Thomas (Chief Horticu turist) to visit U.S.A. and Canada

A progressive move has been mad in Tasmania in arranging for th State Govt. Chief Horticulturist (M P. H. Thomas) to visit U.S.A. an Canada.

Mr. Thomas leaves early in Augu and will observe the packing and di tribution of the 1936 Apple and Pea crop in California, Oregon, Washin ton and British Columbia.

This trip is being undertaken the long leave due to Mr. Thoma His arrangements include spendin time at Research Stations—in pa ticular where the utilisation of was Apples is being attended to.

Concert Singer: "Did you noti how my voice filled the hall t night?"

The Gent.: "Oh, I suppose all tho people who walked out were makin room for it."

Bay View... Fruit Picking Bag

REDUCES YOUR PICKING COST

Mr. Val Kerr, one of Victoria's lea ing orchardists, writes:—
"I have been using Bay View Ba for eight years, and find that th expedite considerably the work picking. They are comfortable wear, and the fruit is handled wi a minimum of bruising."

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Our Juniors' Page

My Dear Smilers,

How are the grins going, despite Black Moth, Codlin Spot (be careful, Mr. Printer, please. you've put those wrong), and getting the cuts for talking in school?

I heard a story the other day. Dad came home earlier than usual, and found John Willie there. Dad said, "Hullo John Willie, what's up, why aren't you at school?" John Willie replied, "Dyspepsia." "What, dyspepsia," exclaimed Dad, 'in a boy of your age, and eating several Apples a day to keep all the doctors in the district away? Come clean, son, what's the trouble? Had a scrap? But don't repeat 'dyspepsia.'" "It's true, Dad, rejoined J.W., "I haven't got it, but I couldn't spell it!"

So pleased to have had more letters from my cheery Smilers. Let's hear from more of you, telling me about school, pets, hobbies, your orchards and gardens. Please also send date of birthday, and I'll send you a packet of seeds as that happy day comes around. Also please trot out some ideas for competitions. Now cheerio, youngsters. Meet we again on this page next month. Your fat jolly,

"UNCLE JOE."

JACK GODFREY IS A "SMILER."

Dear Uncle Joe,

We have been very busy in the orchard and will not finish picking the Apples until the end of May. I am glad you have so many Smilers. My birthday is the 27th of July, right in the winter, and always a cold day for my party. There are a few mushrooms in our paddocks, we like them very much, and wish we could find lots more.

Dinner is nearly ready, so goodbye,

Best wishes,

from Jack Godfrey.

Heatherdale Orchard, Ringwood,
Vic., 20/4/36.

(I'm jolly glad to have your letter Jack. I trust your birthday party was a great success. Write again soon, old chap, and tell me about the varieties of Apples you grow. How are you at pruning and have you a local branch of the Young Farmers' Club. Cheerio and keep smiling. — Uncle Joe.)

BEVAN McKENZIE WOULD LIKE SOME PEN FRIENDS.

Dear Uncle Joe,—Thank you for your ever welcome letter, also for the seed you sent for my birthday.

Now I am going to tell you about our school and hobbies. During our school lessons I always like geography, history, mental and arithmetic.

I take a great interest in collecting stamps, and please if you have any spare ones would you please send me some. I have about 39 stamps and I can't get any others. I also collect footballers' and cricketers' cards; these are some of the cricketers' names:—Woodfull, Bradman, Kippax, D. Blackie, C. Nicholls, S. J. Staples, W. Rowe and Geary, and a lot of others.

SOME OF THE N.S.W. DELEGATES AT THE RECENT COOL STORES' CONFERENCE AT SHEPPARTON, VIC.
Left to right—Messrs. J. E. Dodds, N. L. Quarmby, E. M. Herring, E. C. Whittaker, J. Sedgwick. (Those present at Conference, but not in picture, were Messrs. A. E. Herring, O. J. Butz, C. Buchele and C. Smith.)

I got a push bike for my birthday; my grandmother and grandfather gave it to me.

A boat named "Port Bowen" came into Beauty Point yesterday unloading and loading general cargo, and she went out again to-day.

The fruit is finished here now. I am learning to pack Apples for our school in October. We have to pack for a shield and we get some prizes, too.

Uncle Joe, I would be pleased to have in our Smilers' Club, some pen friends in other States or New Zealand.

I remain, with love, your friend,
Bevan McKenzie.
Rowella, W. Tamar,
Tasmania, 4/7/36.

[Thank you for your cheery letter, Bevan; it was a pleasure to hear from you. Please let me know of your success with the flowers. I am sending you some stamps. I hope some of our juniors in other parts of Australia will write to you. Keep smiling. With love, Uncle Joe.]

MARJORIE IS "SMILING BIGGER."

Dear Uncle Joe,—I received the nice collection of seeds, and am going to plant them soon; my sisters and brothers and I put them on the table and tried seeing how many kinds we could name, but we could not name many.

Now I will give you some farm news. Since I last wrote we have got twenty pigs, three Mid York and 17 Tamworths. We gave the Mid Yorks three names—Mike, the biggest; Sue, next, then Tiny. You will guess he is not the biggest by his name.

Pruning will soon be in full swing. I would have written before, but the Apples had to be got away.—I remain, smiling bigger,

MARJORIE COWEY.
The Patch, Victoria,
1/6/36.

[Another nice letter from you, Marjorie dear. I am always pleased to hear from you. It is nice to know about the pigs and the orchard. I expect the pigs get plenty of Apples. Am also glad that your smiles are increasing. Why, bless me, why shouldn't we smile? A happy disposition helps us all through lots of difficulties.—Cheerio. Write again soon. Your cheery, Uncle Joe.]

Mistress: "The master left home this morning whistling."

New Maid: "Yes, mum; it was my mistake. I made his porridge with birdseed!"

SOUTHERN VICTORIA FRUIT GROWERS' ASSOCIATION.

There was a large attendance at the annual meeting of the Southern Victoria Fruitgrowers' Association at Box Hill on July 2, Mr. F. G. Beet, presiding.

Mr. Minns, market superintendent, Melbourne City Council in an appreciated paper on the Victoria markets, urged the opening of these markets at a later hour. The present hours were nothing short of slavery.

Mr. H. M. Wade (Wholesale Fruit Merchants' Association) said that opening at the later hour suggested would be of benefit to growers and all engaged in the fruit business.

There was an animated discussion. Mr. W. Mock said in moving in favor of there being no shortening of the marketing hours, said he had no objection to comencing at 7 a.m. as suggested.

A resolution in favor of opening the markets at 6 a.m. was carried, the matter to be further considered by a conference of all interested.

Mr. J. M. Ward, Supt. of Horticulture, delivered an address dealing with spraying and manuring experiments, made possible by means of the Federal Research Grant.

ORCHARD WANTED.

On Lease or Shares.

Attention is directed to an advertisement in this issue from an experienced grower who desires an Apple and Pear orchard of 15 to 20 acres on lease or shares, or alternatively a position as orchard manager. Those interested are invited to write to "Jonathan," care of the "Fruit World," Box 1095, G.P.O., Melbourne. The enquirer is experienced in all branches of orchard work—cultural, packing, etc.

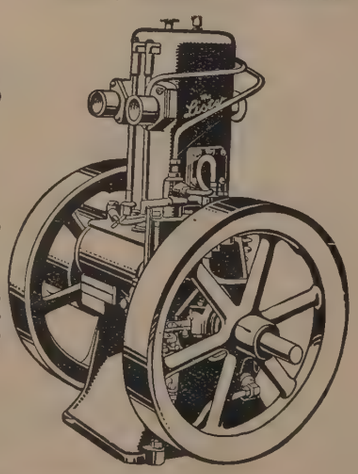
John "Deere" Tractor

THE TRACTOR YOU CAN DEPEND UPON.

Works on Dieselene costing 7d. per gallon, doing twice the work for the same cost. Size just suitable for Mining, Sawmillers, Farmers & Orchardists

"Lister" Diesel Engines

Simple—starts off cold.
No Magneto or Battery.
Cheap Running Costs.



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The World's Best.

"FEDERAL" LINE OF ORCHARD & HARVESTING MACHINERY.
Disc, Diamond & Pasture Harrows, Grain Drills, Fertiliser Sowers, Earth Scoops, Etc.

"COCKSHUTT" AND "FROST & WOOD" MACHINERY.
Canada's Best, comprising Orchard and Farm Plows, Binders, Mowers, Grinders, Pulpers.

CELEBRATED "SHAVE" REVERSIBLE DISC PLOW.
The Original and still the best.

"LISTER-MYERS" PATTERN POWER STATIONARY SPRAY OUTFITS.

"MONARCH" HAND SPRAY BARREL PUMPS, ALSO STATIONARY POWER OUTFITS.

"MOFFATT VIRTUE" FLAME THROWERS.
For eradicating Scrub, Wattles, Blackberries, Etc.

A. G. Webster & Sons Ltd.
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SOLE TASMANIAN AGENTS.

RIDLEY & HOULDING

Covent Garden Market, LONDON

Specialists in Australian Fruit.
Solicit consignments of Apples, Pears, Etc.
Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.

REPRESENTATIVES—
International Fruit & Mercantile Company Ltd., Melb., Vic., Australia; Pitts & Lehman, 129 Pitt St., Sydney, N.S.W.; and A. J. Walshe & Co., Hobart, Tasmania.

Motor Cars, Trucks, Tractors

Watch for Exhaust Fumes.

During the winter, more than at any other time, drivers sometimes thoughtlessly work on their car in a closed garage and often warm up the engine or make adjustment to the mechanism with the door of the garage closed. The danger of this practice is so often reported in the form of monoxide poisoning that more care should be taken. Another danger is through leakage into the car itself, especially a closed car.

Recently tests have been carried out in America that show the necessity for taking precautions against exhaust gases finding their way into closed motor cars.

Deaths have actually occurred through carbon monoxide gas finding its way into the vehicle, and it has been proved that the risk is not confined to the practice of running the engine in a closed garage.

To overcome the danger most modern motor vehicles are equipped with a system of ventilation which is generally referred to as "No draught ventilation." This system of ventilation, when used in conjunction with the cowl ventilator, gives protection against the dangers of carbon monoxide poisoning when the car is on the road.

"I'M SATISFIED—

CHEVROLET IS AUSTRALIA'S TOUGHEST TRUCK"

BUILT TO LAST . . .
THE CHEVROLET ENGINE

"In 1930, I bought a 6-cylinder Chevrolet truck, and I think it only fair to tell you of the wonderful run I've had with it. After 85,000 miles of gruelling work, it still gives 15 to 16 miles to the gallon with a 30 cwt. to 2 ton load over a 'give and take road.' A gallon of oil does for from 900 to 1,000 miles, and repairs to date have cost less than £5."—A.W.U., Corowa.

The Chevrolet engine is a real worker, built for long life and hard toil. Its full-length cylinder-cooling, thermostatic heat control, crankcase ventilation, spray-cooled exhaust valves and pressure stream lubrication are among the features which make it the longest-lived of truck engines. The Chevrolet engine is built to last the life of the truck.

Six Cylinder CHEVROLET Long Life

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114 Franklin St., Melbourne, C.1.

EASY TO BUY UNDER G.M.A.C. PLAN OF DEFERRED PAYMENTS

BAD ALIGNMENT WEARS TYRES.

A TOO common feature seen on the road is the misalignment of tyres, some wobbly and other toed in so that the tyre is wearing unevenly and losing mileage in its life of service.

Many motorists never give a thought to having their machine checked over periodically to see if the alignment of wheels is in order, although it is one of the chief causes of excessive tyre wear. If a wheel is forced to go one way while actually pointing in another, the effect on the tyre tread is disastrous, for every rubber stud of the tread is violently forced out of position while bearing the load, and by the natural resiliency of the rubber, springs back again while there is still some load on it.

To continue to run a motor vehicle with a wheel or wheels out of alignment is about as wasteful as allowing someone to use a coarse rasp on the tyre tread. When it is considered that, under normal conditions, there is a closing up of the tread pattern, in what might be described as a north and south, and east and west direction from about six to eight times a second, according to speed of vehicle, through the flattening of the section of tyre in contact with ground, it will be realised how rapidly changes in movement of the tread blocks takes place whilst the load is being propelled forward. During this rapid movement, the slightest error in the set of the wheels will cause more than normal tyre wear.

S.A. CENTENARY VISITORS.

Should see Holden's Works.

An invitation is extended to visitors attending the S.A. Centenary celebration to view the largest motor body building in the Southern Hemisphere, at Messrs. Holden's, Wayville, Adelaide.

These tremendous Australian works cover an area of 40 acres, with a floor space of over a million square feet, in which some wonderful machinery is installed for stamping out the various parts of the motor vehicle and assembling them ready for completion in the plants scattered throughout the Commonwealth. Most of this machinery has been made in Australia, and Holden's works compare favorably with similar factors in any part of the world.

It is an education in mass production to see the work that is so efficiently done in Adelaide and visitors might well include a visit to Holdens during their visit to the South Australian capital.

RIGHT OF WAY.

In Canada doctors are provided with distinctive horns and badges for motor cars, so that the police will alow them emergency facilities. The British National Motorists' Association has issued to 40,000 medical men a badge incorporating a red cross, which will help the public to identify their cars and give them priority.

REMOVING TUBE PATCHES.

It is often an awkward job to remove a patch on a tube in order to replace it with a larger one, but if a thin coat of rubber solution is smeared on the surface of the patch only, and set fire to, the patch can be peeled off without damaging the tube. This little trick will save much worry if such a replacement is needed on the road. Be sure and clean the tube with petrol, getting all the roughness off before applying the larger patch.

WOMEN DRIVERS.

British Transport Ministry figures reveal that one woman of every three who offer themselves for the motor car driving test fails. Since May 6, 1935, 30,780 women were passed, and 9,580 failed, approximately 32 per cent., while the proportion of men who failed is about 20 per cent.

YELLOW LESS TIRING.

The French Minister of Public Works has decided that all motor car headlights must be yellow, and not white. Investigations have proved that a yellow beam of light is safer on the roads than that given out by ordinary electric bulbs, and also less tiring to the eyes.

Two hundred miles on a gallon of petrol is the record actually accomplished by an ordinary passenger motor car, equipped with a new carburretter invented by C. N. Pogue, of Winnipeg. Satisfied that the invention is practicable, a number of Winnipeg business men have formed a syndicate to finance an organisation to market the accessory.

THREE -MILLIONTH BUICK.

Messrs. Preston Motors Ltd. advise us that the factory delivered the three-millionth Buick on May 28 last. It was a Sedan, and the 139,525th of the 1936 model. These enormous figures show how the world is taking to motoring more generally every year, and that the higher-priced cars are making heavy sales. The lower-priced cars still lead, however, in U.S.A. in the following order: Chevrolet, Ford, Plymouth, Dodge, Oldsmobile, Pontiac and Buick. For the first three months in 1936, 689,172 cars were registered in U.S.A. alone, of which the "Big Three" (General Motors, Ford and Chrysler) accounted for well over half a million. General Motors' sales increased over last year by 67.6 per cent., Chrysler sales increased by 16.2 per cent., whilst Ford decreased by 19.4 per cent., showing that, with all its economical problems, U.S.A. is increasing her expenditure upon new motor vehicles of all kinds.

BATTERIES—
RELIABLE SERVICE
AT
Auto Electric Service Pty. Ltd.
31 Leicester St.
CARLTON
Tel. F 2064

Export & Commercial News

Fruit Prices in the Sydney Market

Survey of Operations for the Period June 25 to July 25, 1936

By L. T. Pearce, Market Representative, Fruitgrowers' Federation of N.S.W.)

Fruit Trade Seasonally Quiet
Usual — Light Crops Affect Ci
Weather Delays Maturing of Tropi
Export Continues Quietly — Pome
Citrus Fruits Still Fave

ONCE MORE the month of July has provel itself the dullest marketing month of the year. Fine weather has been general with temperatures generally very cold early and late in the day, but glorious sun throughout the middle of the day. The limited turnover experienced by retailers, therefore, cannot be attributed to inclement weather, although it is suspected that cold weather inclines people more to purchase vegetables than fruit.

There appeared to be less fruit in the market than is usual at this time of the year, the light crops reducing supplies of N.S.W. Apples and all types of citrus. Prices for Apples for some months have been at a figure which reduces demand and, in consequence, at no time has there been very great enthusiasm on the part of buyers to purchase quantities.

Although the Washington Navel, Lemon, Mandarin and Grapefruit crops are known to be unusually light, supplies have been ample for requirements at prices very little different from those of recent years.

Tropical varieties of fruit arriving from Queensland or the North Coast of N.S.W. have given indications of the cold weather experienced, and absence of color and general immaturity have been evident. Tomatoes experienced a depressed period, ... is unusual at this time of the year, this condition being aggravated a larger crop than usual from vicinity of Brisbane, in addition to the usual Bowen crop.

Apples:

With most Apples, the market favors sellers. This is not to imply that all sizes were popular, or that all varieties were wanted, but that generally speaking prices were ...tained. Arrivals from Tasmania for the period under review approximated possibly in oria also forwarded consistently, and Rome Beauty, shed-stored Granny Smith came from N.S.W.

s in

experi- quality d Delicious.

Arrivals from Tasmania have become less in relation to Aromatic, Cleo. and Delicious, and have increased in regard to Scarlet, Democrat and Sturmer, the latter variety not being yet thoroughly appreciated.

French Crabs have met with good request, particularly if this fruit was green, but unfortunately most arrived showing color, and were sold at lower prices than those quoted.

Prices.—For special and standard grades, quoting in three groups (1) 3in. and over, (2) 2⅝in. and 2¾in., and (3) 2¼in. and 2⅝in.: Aromatic (Tas.) 6/- to 7/-, 7/- to 8/-, 6/- to 7/-; Cleo. (Tas.) 6/6 to 8/-, 7/- to 10/-, 6/- to 7/6; Crofton (Tas.) 8/- to 9/6, 9/- to 10/6, 7/- to 9/-; Del. (N.S.W.) 13/- to 15/-, few higher 14/- to 15/-, 9/- to 12/- Del. (Vic. and Tas.): 9/- to 10/-, few 11/-, 7/- to 9/-; Democrat (Tas. and N.S.W.) 5/- to 7/-, 7/6 to 10/-, 6/6 to 8/-; French Crab (Tas.), green 6/6 to 8/-, 8/- to 9/-, 5/6 to 7/-; Geeveston Fanny (Tas.) 6/6 to 8/-, 8/- to 10/-, 6/- to 7/6; Granny (Tas. to 11/-); N.S.W. 9/- to 13/-, 10/- to 13/-, 6/6 to 8/-; plain grade, 6/- to 9/-; Jon. (Vic. and Tas.) 7/- to 9/-, 9/- to 11/-, 7/- to 8/-; Londons (Tas.) 6/6 to 7/6, 7/- to 8/-, 5/- to 6/-; Rome Beauty (Tas. 7/- to 10/-); N.S.W. 6/- to 8/6, 8/- to 10/-, few 12/-, 7/- to 8/-; Scarlet Pearmain (Tas.) 6/- to 8/-, 7/6 to 10/-, 6/6 to 8/-; Sturmer (Tas.) 6/- to 7/-, 6/6 to 8/-, 5/- to 6/6; Yates (N.S.W. and Vic.): 10/- to 11/-, 7/6 to 9/6. Plain and "D" grades lower.

Pears:

Packham's have been chiefly noticeable, N.S.W. supplies being supplemented by fairly heavy deliveries from Victoria. Winter Cole still continue to appear from N.S.W. sources chiefly and, although Bosc appeared to cease during June, they have since appeared both from Victoria and N.S.W. The maturity that was showing in N.S.W. Pears caused supplies to be released from cool store in some

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instances earlier than was expected, and the Pear market has eased instead of firming. This has been most noticeable with Winter Cole, which were selling at 14/- at the end of June, but are now back to 11/-, while most sales of Packham's are made at 8/- to 10/-, only firm, special green fruit realising to 12/-. Prices:—Quoting in three groups for special and standard grades (1) 3in. and over, (2) 2⅞in. and 2½in. and (3) 2⅜in., 2¼in. and 2⅛in.: Jos. (N.S.W. and Tas.) 9/6 to 10/-, 9/6 to 10/-, 7/6 to 9/-; Packham's (N.S.W., Vic. and Tas.) 8/- to 11/-, 9/- to 12/-, 7/- to 11/-; Winter Cole (N.S.W., Vic. and Tas.): 10/- to 11/-, 7/- to 11/-; Winter Nelis (Tas. and Vic.) 8/- to 9/-, 9/- to 10/-, 7/- to 9/-; Bosc N.S.W. to 8/6 Vic. 8/- to 9/-, 9/- to 10/-, 8/- to 9/-. Plain and "D" grades lower.

Note: It was suggested recently that there were indications that the high prices asked for Apples and Pears had reduced demand in many quarters. Prices since have eased in the endeavor to clear those fruits that were showing advanced maturity. Large sizes are particularly difficult.

Bananas:

Arrivals since June 25 total 31,325 tropical cases, of which number 28,788 came from N.S.W. and 2,537 from Queensland. As is unfortunately the case at this time of the year, much of the fruit has been small, and a noticeable percentage affected with "squirter." These types have been a drag upon the market, and prices have been affected thereby. Maldistribution to the various States has been avoided when possible by advice from the Banana Growers' Federation and the N.S.W. Banana Board, and generally, larger quantities were sought by vendors.

Values have been steadier than is customary, which fact can be attributed to even distribution. Prices:—According to the N.S.W. Banana Board, for regulation graded, first quality fruit, six inch, 13/- to 15/-; seven inch, 15/- to 17/-; eight and nine inch, 17/- to 20/-. Incorrectly graded, medium quality, and poor quality fruit lower.

Custard Apples:

Supplies of this fruit were maintained from Queensland, 1,881 half-bushel cases being consumed on the Sydney market. Prices varied according to state of maturity, advanced being 3/- to 4/6, and when less advanced at 4/- to 5/- per half-bushel case.

Citrus Fruits.

The month has been conspicuous owing to the supplies being lighter than is usual at this time of the year. Nevertheless, this has been demonstrated more by the absence of surplus stocks and the customary repacking in the market, than by enhanced values. It is reported also, that growers are marketing a greater proportion of their crop than usual, with the exception of small Mandarins.

Grape Fruit:

Just latterly vendors have reported that stocks were becoming troublesome, particularly small sizes of coastal fruit. Prices had been reasonably satisfactory, but now, only counts 56 to 72 of heavy, clean skinned fruit are wanted. Californian surplus fruit was about until the middle of July, but prices were lower than could be profitable. Arrivals from Narromine and Mangrove Mountain, also Kurrajong, achieved the best prices, while others proved of questionable value. Prices:—Local, special and standard, counts 56 to 72, 4/- to 7/-, few extra special to 11/-; other counts 2/- to 4/-. Inland, 5/- to 8/-, few extra special to 12/-.

Lemons:

Publicity has been given through a number of sources, regarding the lightness of the Lemon crop, and growers have been advised to seek better values from processors than they usually give. Inland supplies have been inconsiderable on the open market, chief arrivals coming from Metropolitan and Coastal sources. Prices:—For special and standard grades, counts 96 to 150, 3/6 to 5/-; counts 163 to 216, 4/- to 6/-; counts 234 to 270, 3/6 to 5/-; plain grade, 2/- to 3/-; few inland to 7/- and 8/-; factory price 3/6 per bushel and 6/- per bag.

Oranges:

Navels: Values eased a little during the month, largely owing to the preponderance of large sizes. Crates (two bushel) and bags were used extensively from the M.I.A. for the large sizes, but Oranges in cases from inland sources were not very noticeable. Hawkesbury fruit was the most plentiful, and this district is reported as being well advanced with marketing the crop. Coastal fruit is light. Prices:—Special and standard, counts 64 to 96, local 4/- to 5/-; inland 5/- to 7/-; 113 to 125, local 5/6 to 7/-; inland 6/- to 8/-; 138 to 198, local 5/- to 5/6; inland 6/- to 7/-. Plain grade 3/- to 4/- per bushel. Two bushel crates (large sizes from inland sources) 7/6 to 10/-, few 11/-; bags 8/- to 9/-.

Other Oranges: Counts 163 to 188 have experienced chief request latterly, prices being 3/- to 4/-, with others at 2/- to 3/-. Processors have been purchasing at 3/-, this price being affected by growers' eagerness to sell at the factory door.

Mandarins: Small fruit has been a problem, yet wastage has not occurred as in other years. Buyers have wanted counts 140 to 240, but were not agreeable to always pay 6/- and many sales have been made at 4/-. Variations in pack and quality largely determine the variations in price recorded. Most Hawkesbury fruit appears to have been marketed, but the Hills District product promises to be late in maturing. Fruit is mostly of excellent quality. Queensland supplies of Beauty of Glen Retreat continued until latterly, the fruit meeting with good demand at 10/- to 12/- per bushel. Prices:—N.S.W. special and standard, counts 140 to 240, 4/- to 6/-, few 7/-; counts 260 to 300, 2/6 to 4/-, smaller 1/6 to 2/6 per bushel. The above prices refer to Emperor variety, while Thorny sell at 2/- to 4/6 per half bushel.

Passionfruit:

A dullness has characterised this market, although supplies have only been light. A few are arriving from Queensland. Prices:—Most sales 6/- to 9/-, few special 10/- to 12/-; inferior from 3/- per half bushel. Processors clear most of the sound small fruit at 3/-.

Pineapples:

Arrivals from Queensland totalled 8,390 tropical cases for the period under review. Immaturity in the fruit repelled consumption and values throughout the month continued easy. Prices:—Counts of large fruit 7/- to 8/-, counts 18 to 24, 8/- to 9/- per tropical case. Small sizes have not been seen.

Papaws:

Arrivals from Queensland totalled 362 tropical cases. Only colored fruit sold and prices were 10/- to 14/-, choice colored was very scarce and brought to 18/- and latterly to 16/-. Green fruit comprised most of the arrivals, and some of this failed to ripen in three weeks.

Strawberries:

Queensland supplies totalled 5,303 trays, and 711 cases of boxes (20 per case). The cold weather in Queensland prevented color developing most of the time, and values generally were affected. Prices:—2/- to 4/- per tray; 6/- to 10/- per dozen boxes. These are week-end prices and slightly higher than mid-week prices.

Tomatoes:

Values grew worse as the month progressed, and as Queensland supplies increased. Growers in the vicinity of Brisbane are forwarding a heavy crop in addition to the usual Bowen crop. Much of the fruit takes three weeks to ripen and repackers and ripeners have suffered some loss due to disease appearing. Prices:—Queensland, 2/- to 4/-, special colored to 5/6. Repacked 3/- to 6/- per half bushel. N.S.W. supplies have practically ceased to arrive.

FRUIT MARKETING IN SYDNEY.

Trouble With Some Victorian Apples.

(By Our Correspondent.)

There was a prompt reaction to the recent Interstate Apple and Pear Grading Conference at Sydney.

On the Monday following the Conference the ship bringing fruit from Victoria was met by four inspectors instead of the usual two.

The inspection was far more thorough, and the fruit which came forward was not of the usual high Victorian standard. Much of it was rubbish which should never have been shipped; in a number of instances fruit was found infested with codlin moth. Some of the lines did not carry any grade mark, which is a contravention of the regulations. Other fruit carrying grade marks was "de-graded," while some was actually condemned. The condemned fruit had to go to the fumigator for repacking. The charges are about 9d. per case for repacking, plus 3/- per hour for the inspectors' time. The fruit rejected after repacking was destroyed.

The net result was that delivery was delayed for a full day, and as Monday's market is the most important of the week, Victorian growers will find that considerable losses were thus incurred.

It is understood that this strict inspection is to be continued.

SYDNEY'S NEW MARKETS.

With the exception of one block of buildings in Hay-street, demolition has been completed on the land to be occupied by the new vegetable markets. The erection of the new markets will be commenced shortly, and provision has been made for a section to be devoted entirely to the sale of flowers and seedlings.

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Tasmania: State Fruit Advisory Board.

New South Wales: Griffith Producers' Co-op. Co. Ltd.
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Fruit Marketing in Sydney

Interstate Conference Recommends Setting up a Consultative Committee to Improve Marketing.

CONVENED by the N.S.W. Chamber of Fruit and Vegetable industries, an Interstate Conference was held at Sydney on July 8.

There were present Messrs. L. J. Jenkins (Chairman), Col. E. E. Herrod (Fruitgrowers' Federation of N.S.W.), Messrs. Smith, Abel and Taylor (Tasmanian State Fruit Board), R. E. Boardman (Victorian Fruit Marketing Association), L. Dubois (Gosford Bulk Loading Rural Co-op.), T. Cassell (Niagara Park Fruitgrowers' Association), P. Rutlidge (Yenda Producers' Co-op.), J. M. Ward, Supt. of Horticulture, Victoria; H. McKay, Tasmanian Government Representative; Messrs. Musgrove, Walker, Ward, MacDermott, Chilton, Curtis, Woodward, Mason, Cooke, Roughley, Pogson, of the N.S.W. Chamber of Fruit and Vegetable Industries.

The Chairman welcomed the visitors, and pointed out that the Conference was called in accordance with the resolution passed at the Conference on April 16, 1936.

The Chamber considered it essential that the various sections of the industry come together and co-operate to put the industry on a better footing.

After a very full discussion it was resolved:—

"That this meeting considers it advisable that a Consultative Committee consisting of fruit producers and distributors be formed to improve the marketing of fruit in New South Wales."

It was decided that the name of the committee should be "Fruit Industry Consultative Committee."

The functions of the body were agreed on as follows:—

1. To work for the establishment of a Trust to control the administration of the Fruit and Vegetable Markets, such Trust to be composed of equal representation of producers and distributors with a Government nominated Chairman to represent the consumers.

2. To work for the formation of a Licensing Board with power to issue all licenses to fruit and vegetable agents.

3. To consider the advisability of the limitation of fruit and vegetable agents.

4. To make a survey of suitable varieties of fruit for each district and the acceptability of these varieties by the market, and also the marketing periods for the respective varieties.

5. To arrange for the preparation at the earliest possible moment of efficient crop statistics of fruit and the supply of same progressively during the season.

6. To aim for the enforcement of specifications in regard to sizes and packs of fruit to ensure uniformity.

7. To confer, when necessary, with all representative organisations of the industry, and to co-operate and co-ordinate where practicable and advisable.

8. To endeavour to secure reductions of steamer and railway freights.

9. To eliminate damage during transport to market.

Representation.

It was resolved that producers' representatives be from the recognised representative body of fruitgrowers in each State.

The Chamber of Fruit and Vegetable Industries shall represent the Distributors.

That each State organisation shall have two votes and that the voting power of distributors shall be on the basis of three votes to each four of the producers votes operating at the meeting concerned.

All resolutions passed were subject to ratification by the representative Interstate bodies concerned.

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the British Empire—while one section, where vegetables are sold, would disgrace even a primitive bazaar in Abyssinia.

It is no wonder that producers and distributors are earnestly seeking to have the control of the markets removed from the Sydney City Council and placed under a Market Commission or Trust composed of representatives of growers, traders, the public and the Government.

The present proposal of the Council is to spend £500,000 on a market for market gardeners only, doing nothing at all to bring the present markets up-to-date, and not making provision for further parking space, but, on the contrary, making the congestion more acute.

Both the Fruitgrowers' Federation of N.S.W. and the N.S.W. Chamber of Fruit and Vegetable Industries are completely convinced that the present proposals of the City Council are wasteful and unsatisfactory, and that by spending a sum very much less than the present estimate, the markets can be brought up-to-date, thus conserving the interests of fruitgrowers, market gardeners, the wholesale and retail trade.

Of the £500,000 which the Sydney City Council proposes to spend on the markets, £375,000 is for land resumption, £125,000 on buildings—i.e., erecting of a market for approximately 500 market gardeners.

The outlay of this huge sum will not in any way improve the existing deplorable conditions for the selling of fruit and vegetables by the present licensed agents, who handle the produce of around 30,000 fruit and vegetable growers in Australia, nor will it relieve the present desperate traffic congestion.

The Government has been informed that by spending approximately half the sum mentioned, the present markets could be remodelled and brought up-to-date——an urgent matter, if ever there was one—thus conserving the interests of fruit growers and market gardeners in N.S.W., as well as those in other parts of the Commonwealth who send to Sydney.

Market Notes and Prices

NEW SOUTH WALES.

Sydney (28/7/36): Apples, Aromatic 6/- to 8/-, Cleo. 6/- to 10/-, Crofton 7/- to 10/6, Del. 9/- to 15/-, Demo. 5/- to 10/-, French Crab 5/6 to 9/-, Geeveston Fanny 6/- to 10/-, G. Smith 6/6 to 12/-, Jon. 7/- to 11/-, L. Pippin 5/- to 8/-, R. Beauty 6/- to 10/-, Scarlet Pearmain 6/- to 10/-, Sturmer Pippin 5/- to 8/-, Yates 7/6 to 11/-. Pears, Jos. 7/6 to 10/-, Packhams 7/- to 11/-, W. Cole 7/- to 11/-, W. Nelis 7/- to 10/-, B. Bosc 8/- to 10/-. **Comments on the Apple and Pear position:** Arrivals from Tasmania for the past week approximated 17,642 cases. All arrivals have not reached the market due to the "Talune" being late in arriving. Inspection at the wharves caused some Tasmanian fruit to be written down in grade. Slightly better request was experienced for N.S.W. Granny Smith, but very few sales were above 12/-. **Pears:** Packham's Triumph experienced better demand and other values were unaltered.

Bananas, N.S.W. and Qld. 14/- to 21/- trop. case, Custard Apples, Qld. 3/6 to 5/- half case. Citrus: Grapefruit 2/- to 8/-, few 12/- bush. Lemons, N.S.W. 2/- to 5/-, few special inland 5/- to 7/- bush. Oranges: Navels, N.S.W. 4/- to 8/- bush., Mandarins, N.S.W., Emperor 1/6 to 6/- bush., Thorny 2/- to 4/6 half bush., Qld., Beauty of Glen Retreat 7/6 to 11/- bush.

Passionfruit, N.S.W. 6/- to 9/-, special 10/- to 12/-, inferior from 3/- half case. Pineapples, Qld., Queen 7/- to 10/-, Papaws, Qld., 8/- to 15/- trop. case. Strawberries, Qld., 1/6 to 3/6 tray, 5/- to 9/- doz. boxes. Tomatoes, N.S.W. 2/- to 4/-, colored to 5/- half case, Qld. Bowen, green 3/- to 4/6, colored higher per half case, Brisbane, green 2/- to 4/- half case, repacked 4/- to 6/6 half bush. case.

VICTORIA.

Market Report for July.

ON the whole, July was slightly quieter than was expected. Most lines were normal, but there wasn't any marked increase in trading. Tomatoes made their appearance from Adelaide, though again growers picked too early. The rise expected for Apples did not materialise. All Winter lines were steady, with no outstanding reports either of supply or demand. Weather again has been effective in preventing any heavy clearances.

Bananas steady, prices even and demand about normal for July. Supplies fairly well distributed.

Citrus: First quality Navels were light, with a firm demand. Good supplies of medium quality, but demand short. Owing to exports, South Australian Oranges were on the light side, as also were Mildura samples. Prices, however, did not rise comparable with supplies. Grapefruit was very slow, inferior lines practically unsaleable.

Tomatoes: Adelaide new seasons came in a little earlier than last year. Quality was fair with a few soft packs. Some growers picked too green in order to secure first market. They should be allowed to color more on the vines as there would be a good sale for colored samples, as they came, they had to be held too long. Prices ranged from 20/- at the start to 15/- during the last week.

Celery: Supplies fair with prices steady. Quality was right, if anything, on the green side, at latter end of month.

Apples: No increased demand. The rise that promised did not appear. Prices normal and demand cleared well.

Lemons: Slow during early weeks, but improved in last week.

Mandarins: Fair quality, prices satisfactory, quality average. August should show an improvement, both in prices and demand. Supplies will strengthen and, given reasonable weather, sales should increase all-round.

Melbourne (1/8/36): The following prices are quoted by the Wholesale Fruit Merchants' Association. Per case: Apples, Eating, 5/- to 7/-; choice higher; cooking, 4/- to 6/-; choice higher. Bananas, per double case, green, best, 13/- to 18/-. Custard Apples, 6/- to 7/- half case. Celery, Sth. Aust., 7/- to 10/-; choice higher. Grapefruit, 4/- to 8/-; few higher. Lemons, 5/- to 7/-; few higher. Mandarins, 6/- to 8/-; special higher; small and inferior lower. Navel Oranges, 4/6 to 10/-; special higher. Passionfruit, 14/- to 20/-; special higher. Pears, 4/- to 7/-; few higher. Pineapples, 8/- to 10/-. Tomatoes, Sth. Aust., half cases, best ripe, 15/-; do., Qld., repacked, 6/- to 7/-, a few higher.

The Melbourne market manager of the Federal Citrus Council of Australia reports: Navel Oranges, average standards, 60-68, 4/-; 75-84, 4/6; 96-112, 5/-; 126 up, 6/- to 6/6; good standards, 4/6 to 7/-, a few 8/-; selected standards, 6/- to 10/-; specially selected higher. Grapefruit, Marsh Seedless, average standards, 4/- to 5/-; good standards, 5/- to 6/-; a few 7/-; selected, 5/- to 8/-; specially selected higher. Lemons, average standards, to 6/-; selected, to 7/-, a few 8/-. Mandarins, good Emperors, including N.S.W., large, to 8/-; medium, to 6/-; small (330 up), from 3/- and 4/-; good red varieties, to 10/-; a few specially selected Dancys higher. Poorman's and Seville Oranges, average standards, to 5/- and 6/-; a few selected to 7/- and 8/-.

Ship Your Oranges, Lemons, Grapes to New Zealand

All consignments for this market will have careful attention and realise highest prices if sent to

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Accredited Agents for Victorian Central Citrus Association and Affiliated Association.

City Telephone: F 6444. Private Phone: M 3055.

Bankers: National Bank of Australasia (Western Branch), Melb.

QUEENSLAND.

Brisbane (16/7/36): Messrs. Robsons Pty. Ltd. report as follows: — **Apples**, choice Jons. to 12/-, Rome Beauties to 11/-, Cleos. and Green Crabs to 12/-, G. Smiths 13/-. **Pears**, Winter Coles to 15/-, Jos. 13/-, Packham 12/-, and Bosc to 11/-. **Citrus**, small Mandarins are slow of sale, selling from 2/- to 5/-, larger size 6/- to 8/-. Oranges 3/- to 6/-. Navels to 9/6, and Lemons from 7/- to 11/-. **Pines:** Rough leaf to 7/6 c/s, Smooth to 8/6. **Custard Apples**, 2/6 and 3/6. **Papaws** to 11/- tropical c/s. **Passionfruit** to 11/-. Bananas to 4d. dozen. Cased 6's 11/-, 7's 12/6, 8's 13/6. Vegetable values are holding firm with the exception of Tomatoes. Cabbage to 8/- doz., Cauliflowers to 12/-, Beans 13/- per 30 lb. bag, Peas 12/-, Cucumbers 10/- c/s. Tomatoes, green 2/- to 3/-, colored 4/6.

Brisbane (21/7/36): Messrs. Clark and Jesser advise as follows: During the month past we have had a good deal of rainy weather here, and the market generally has been dull.

The ruling prices at present are:— **Apples:** Jon. 2½ and 2¾ 10/- to 11/-, 2¼ 7/6 to 8/-, R. Beauties 9/- to 10/-, SPM 10/- to 11/-, Sturmers 9/- to 10/-, French Crabs 9/- to 10/-, G. Smiths 11/- to 13/-. **Pears** are in good demand, W. Coles selling 12/- to 14/-, W. Nelis 11/- to 13/-, Packhams 11/- to 12/-, Bosc 8/- to 9/-. **Mandarins**, Emperors 6/- to 7/-, Scarlets 7/- to 9/-, Glens 8/- to 10/-. **Oranges** 5/- to 7/-, **Navels** 7/- to 8/6. **Custard Apples** 3/6 per qrt. case. **Tomatoes** 3/- to 5/-. **Cabbage** 6/- to 8/- doz. **Cauliflowers** 8/- to 10/-. **Peas** 8/- to 10/- sugar bag. **Beans** 8/- to 10/-. **Bananas** 11/- to 14/- case. **Pineapples, Rough** 5/- to 7/- case, **Smooths** 6/- case. The cold weather which has prevailed for the past few weeks has stimulated the sale of vegetables, but has caused a decreased demand for fruit.

WESTERN AUUSTRALIA.

Perth (27/7/36): Apples: Dunn's, dumps 4/- to 8/6; R. Beauty 5/- to 8/9, Yates 5/- to 11/6 (others from 3/-), G. Smith 4/6 to 10/6 (special to 11/6), Cleo. 5/- to 8/6, Del. 8/- to 11/6 (special to 12/-), Rokewood 6/- to 8/-, Statesman 7/- to 8/9, Doherty 5/6 to 7/6; Citrus: Navels, flats 2/- to 7/6, dumps 4/- to 9/- (special to 9/6), Lemons 2/- to 6/-, Mandarins 4/- to 10/- (special to 10/6, others from 3/-). Other Lines: Passionfruit, quarter-cases to 9/-, Tomatoes, local 6/- to 23/-, ex Geraldton 8/- to 23/-.

SOUTH AUSTRALIA.

Adelaide (31/7/36): Apples (eating) 8/- to 9/- case, do. (cooking) 7/- to 8/-, Bananas 18/- to 22/- crate, Lemons 5/- case, Oranges (Mandarin) 8/- to 9/- case, do. (Mandarin) 8/- to 9/- case, do. (Navel) 5/- to 8/-, Grapefruit 6/- to 7/-, Pears (eating) 9/- to 10/-, Pineapples 15/- to 17/-.

NEW ZEALAND.

Dunedin (23/7/36): Messrs. Reilly's Central Produce Mart Ltd. report as follows:—Apples are in rather shorter supply, and good quality fruit is in demand; second grade lines meeting a poor enquiry. Good dessert Pears are realising satisfactory values.

Fresh vegetables are meeting with a demand, values for most lines being satisfactory. Potatoes are still slow of sale, and only the King Edward variety has any inquiry. Canterbury Onions are still coming to hand, sales being slow. A shipment of Californian and Japanese was received during the week. There is a good inquiry for seed Potatoes, early varieties having an excellent demand.

Marmalade Oranges and N.Z. Lemons are in demand. Prices for Cal. Lemons show a considerable advance. The "Waitaki" has arrived with a further shipment of Sth. Aust. Oranges, and Mandarins, also a small quantity of Qld. Pineapples. There is an excellent enquiry for this shipment, which is practically booked up. There is a fair demand for ripe Bananas.

Prices, per case: Cal. Lemons 65/-, Grapefruit 38/-, Vals. 40/-, Aust. Navels 15/- to 21/-. Mandarins 26/-, ripe Bananas 18/-, Pines 18/- to 20/-, Apples, first grade, Cleo. 6/- to 7/-, Jon. 6/- to 7/6, Del. 7/- to 9/-, Sturmers 6/- to 8/-, Statesman 5/- to 6/-, R. Beauty 5/- to 6/-, Lord Wolselys 5/- to 6/-, Cooking Apples 5/- to 6/-, Black Spot, second grade fruit 3/- to 4/6, Pears, W. Cole 7/- to 9/-, Nelis 7/- to 9/-, Cooking Pears 5/- to 6/-, N.Z. Lemons 16/- to 20/-, Marmalade Oranges 12/6 to 14/-. Per half case: Pears, W. Cole 3/- to 4/6, Nelis, 3/- to 5/-, P. Barry 4/-.

APPLES AND PEARS IN U.K.

London, July 25.

The demand for Apples is good. Prices are firmer. Quotations:—

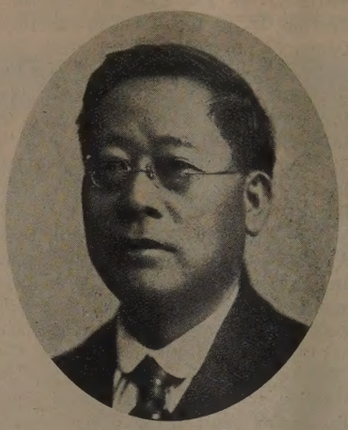
Tas. (ex "Baradine," "Ormonde," "Napier Star," "Port Townsville").— Sturmers, 6/- to 8/6 a case; Granny Smiths, 11/- to 11/9; Croftons, 8/9 to 9/3. Vic. (ex "Napier Star").—Yates, 8/- to 9/-. N.Z. (ex "Rotorua," "Rangitane," "Hororata"). — Granny Smiths, 10/3 to 13/6; Sturmers, 7/6 to 8/6.

FIRMS IN THE FRUIT TRADE

H. Louey Pang and Co. Pty. Ltd.

(No. 12 of Series.)

IN 1888, Mr. H. Louey Pang arrived in Australia, and, having quickly grasped a good working knowledge of the language, started business as a manufacturer. In this business for many years he gained a very wide commercial experience, and sound business education and became known to all who transacted business with him as a man of the soundest integrity.



Mr. H. Louey Pang.

In 1917 he was requested by many of his own countrymen to handle their orchard products, and so established the present fruit business. Transactions became extended, and in a very short time it was found necessary to secure larger premises. As the Western Market was too hopelessly congested to permit of any additional business there, Mr. Pang took the risk of building a large brick store at 172-176 Little Bourke-street, Melbourne.

After extensive touring of the fruit districts and personally interviewing growers, and with the publicity so courteously afforded by "The Fruit World," a large and successful centre for mixed fruit marketing was established, and it was not long before 18 more distributors followed the example of making their centres in this locality. An annual turnover of 200,000 cases of fruit was being handled very comfortably, and prompt payments, with continued personal contact with growers, was the secret of continued success.

The firm has continuously been an accredited agent for almost every organisation of fruitgrowers and vegetable growers in Australia, having been amongst the pioneer agents at the inception of the Citrus Council of Australia and the Victorian Central Citrus Association.

Seeing great opportunity for export to China, Mr. Pang made several trips overseas for the purpose of opening up markets there for Australian fruits, both fresh, dried, and canned. Unfortunately, owing to an amount of apathy on the part of the Australian producer, and the keenness of the Americans, not as much is being done in this direction as could be done. However, the market has been opened, and the firm continues to export fruit.

Following his last visit to China, Mr. Pang is convinced that a market for Australian fruits can be developed in the Far East. Last year several small shipments of Apples to China returned a profit, and he feels that these markets should be aggressively exploited. At first the market would be comparatively small, as the American shippers have already obtained a good hold, but Apples, Pears, Grapes as well as canned and dried fruits, dependent upon good quality and packing, would receive a welcome if such exports were continuous.

When the new wholesale fruit market was opened in 1930, the scene of business was moved to the Company's present address at No. 4 Wholesale Fruit Market, Melbourne. No material difference has been made by this move, and business is being carried on successfully as always, with every consideration for the consignor and prompt returns and payment.

The firm of H. Louey Pang and Co. Pty. Ltd. is, practically speaking, a family concern, and the management is retained in the personal hands of Mr. H. Louey Pang, managing director, and his brother, Mr. Louey Gook, manager, assisted by two nephews, Louey Shue and Louey Yen, who manage the citrus and Banana and general fruit departments respectively.

SPECIAL NOTICE TO FRUITGROWERS

All Members under Fidelity Bond

In response to numerous requests from growers for information as to who are members of the

Wholesale Fruit Merchants' Association of Victoria

the following list is given. All are members of the above Association, and are registered firms carrying on business in the

WHOLESALE FRUIT MARKET, MELBOURNE.

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H. M. WADE & CO. (21).
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FRANK BOOTH & SONS PTY. LTD. (16).
GEO. LISTER PTY. LTD. (12).
TIM YOUNG & CO. PTY. LTD. (18).
F. W. VEAR PTY. LTD. (28).
YEE HOP LOONG & CO. (32).

Office : 21 Wholesale Fruit Market, Queen Street, Melbourne. Phone F 4866.

Correspondence is invited by the Association.

The Home Circle

Attention to Children

HELPFUL HINTS were given by Mrs. Hampel at a recent meeting of the Wilmington Branch of the South Australian Agricultural Bureau (published in the "S.A. Journal of Agriculture). A summary of Mrs. Hampel's remarks are as follows:—

AN ORDINARY COLD may not be a very serious matter, but it inflames the tender lining membranes of the nose, and once this condition has set in, other colds are likely to follow.

When once a child starts to have a series of colds, his appetite suffers, as well as his general virility and well-being; and often, after a time, enlarged tonsils and adenoids follow. These stand in the way of the child's general development until they have been removed. Ear troubles often follow as a consequence of bad colds, and even the teeth are affected in time, because constant mouth breathing prevents the proper formation of the jaw. Every mother should really look upon the common cold as an enemy to health, and one that may bring many others along with it.

If a

Baby Has a Cold,

one cannot do a great deal for him beyond keeping him quite warm and out of draughts; keeping his bowels well open, and giving a lighter diet than usual, with frequent sips of water. His nose can be cleaned with a camel hair brush dipped in warm olive oil, and a little white vaseline should be rubbed into the root of the nose to prevent soreness.

A healthy baby should throw off a cold quickly, and if he does not, he needs medical attention. Older children should be given light nourishing food and plenty of fluids—water, barley water, and fruit drinks. A child whose head is stuffed up with catarrh will not need heavy meals, and is better without them.

If the cold is very heavy, the weather severe, or if there is any temperature, the child is best in bed and out of draught in an airy room; and if he is kept warm, should throw the cold off quickly. The nose must be kept as clear as possible, and it is best to use paper hankies or scraps of soft, old sheeting which can afterwards be burnt.

It is important to teach children to blow their noses thoroughly, one nostril at a time, but a child with a cold should not be encouraged to blow too hard, for this sometimes has the effect of forcing the discharge into the cavities on each side of the bridge of the nose.

If there is a tendency to a tickling cough, it will be found that **glycerine, honey and Lemon**, or **Black-Currant tea** (made with jam or jelly and boiling water—all cheap, homely remedies) have a most soothing effect. Syrup of squills and tolu is also a good cough mixture that can be given throughout childhood. Sometimes, however, a cough is so persistent that nothing appears to check it, and often a child will cough through the whole night. In such cases, the best remedy is to paint the throat with a clean brush dipped in glycerine and tannin. It is not very pleasant, but it gets to the root of the trouble, and most children will submit to it if they are rewarded with a Black Currant lozenge or piece of barley sugar.

A chest cold needs a doctor's supervision, for with children there is always a risk of bronchitis. For a chest cough, glycerine, honey and Lemon is a good cough mixture; it is soothing, and seems to "cut" the phlegm. Rubbing the chest with camphorated oil will sometimes give relief, and is an old and helpful remedy.

A child with a healthy throat should not get a severe sore throat; when this occurs frequently, it is usually a sign that the tonsils need attention. But sometimes a child will suffer from a red, inflamed throat after going out in a cold wind.

It is always best to isolate a child with a sore throat, for it may be an early sign of one of the infectious ailments, and if a child has a throat with whitish patches on it, the doctor should be sent for.

It may be a mild attack of tonsilitis, or septic throat, but it may be something more serious. However, a mild sore throat should clear up quickly if the child is kept warm and in bed if there is any temperature. Gargling is soothing and effective, and a mild carbolic gargle is usually given to any child who is old enough to be taught not to swallow. Glycerine lozenges can be given freely, and the diet should be very light and easily eaten —broth, beef-tea, a poached egg, or steamed fish, jelly, custard, Grapes and the rest.

Prevention.—Feed the children well, keep them warm, provide good strong shoes, keep them from crowded places and they should not catch cold. Teach them to breathe through their noses, how to blow the nose properly, provide clean hankies regularly, and impress upon each child that a hankie is a personal possession, and on no account to be borrowed. It is a good plan to teach every child to gargle from an early age. Gargling keeps the throat healthy, and greatly adds resistance to germ infection. Above all, it is best to have advice about a child who has a constant run of colds in spite of every care. The probability is that the nose and throat are not quite healthy, and often the simple operation for the removal of adenoids and tonsils will do a lot for a child, curing constant colds and improving his general health and development.

HONEY A QUICK FOOD.

If people knew the value of honey, more would be used, and a stimulus given to beekeeping. It would be better if people with a "sweet tooth" used more honey and less candy and white sugar. Honey is one of the quickest-acting of all foods.

Most foods must be digested or broken down into simpler substances before they can be utilised by the human body, but this is not true of honey. Honey is composed of two simple sugars—dextrose and levulose —which can be absorbed directly into the blood stream and made available at once for energy, without any tax on the digestive system.

This fact explains why honey is such a desirable sweetening for the food of infants, invalids and aged persons.

Berry Fruit Culture

Gooseberries—Red Currants

GOOSEBERRIES.

Few fruits are more popular for preserving purposes in temperate climates than the Gooseberry, and as a dessert fruit, when properly grown, it is most health-giving and palatable.

Almost all the varieties of Gooseberry cultivated on a commercial scale in Tasmania are of European origin, and derived from the European species Ribes grossularia. Good native species, such as R. cynosbati and R. hirtellum, have been found in America, but few varieties of any note have so far been developed from them.

Manuring.

Gooseberries probably respond better to ordinary farmyard manure dressings than any other fruit, and doubled and redoubled applications gave corresponding increases in crop produced in a number of experimental plot trials. Fair crops may be obtained from artificial fertilisers where irrigation can be carried out, or the rainfall is particularly good during the growing season. Potash applications, at the rate of from 1 to 2 cwt. per acre, have proved very beneficial, and this fertiliser is essential to successful production, especially on the lighter soils, where leaf-scorch is prevalent. For the first few years, however, farmyard manure should be applied sparingly, as otherwise excessive woody growth, which often fails to ripen properly, and is unsuitable for fruit-production, will result.

Gooseberries are so frequently harvested in a small and immature condition for culinary purposes that it is difficult to get accurate production figures. Varieties harvested for the early markets, therefore, may not be much more than half-grown, and 200 to 300 bushels per acre would be satisfactory. Berries which are left until fully developed and commencing to turn color may crop 500 bushels or more per acre.

Varieties.

Gooseberries may be roughly classified according to color—red, yellow, and green or white. There are once again innumerable varieties, but only the outstanding commercial sorts will be described in detail:—

Reds.

Crown Bob.—This is the main commercial berry grown in the south of the State. The fruits are of fair flavor when ripe. Much used for culinary and bottling purposes in the green state. The bush is vigorous and rather drooping.

Lancashire Lad.—Similar in many ways to Crown Bob, but is larger in size, later, and better for culinary purposes. Bush vigorous and slightly drooping.

Whinham's Industry.—The most popular commercial variety in England. Excellent for both culinary and dessert. Very vigorous growth, spreading.

May Duke.—Very early, and much used for culinary purposes.

Ironmonger.—Good flavored dessert, small. Bush drooping.

Greens.

Careless.—Second early, flavor good. Bush rather weak in growth.

Keepsake.—Early, good size and flavor, culinary and dessert. Vigorous, healthy grower.

Whitesmith (Chatauqua).—Flavor good, dessert and culinary. Very prolific, and good all-round grower.

Yellows.

Laveller.—Large dessert variety, flavor very good. Bush prolific and vigorous.

Cousen's Seedling.—Late variety, dessert, flavor very good. Growth good and spreading, prolific.

Early Sulphur.—Good flavored dessert. Bush vigorous.

Diseases.

Fortunately, growers of Gooseberries in Tasmania has practically no diseases to combat. American gooseberry mildew is unknown, and Botrytis dieback, so common in other parts, is very seldom seen. Cluster crop fungus is also absent, as is also Gooseberry cawfly. The Currant-borer is present, but seldom damages the Gooseberry to any extent.

RED CURRANTS.

The parent of the greater number of Red Currant varieties at present in cultivation is the European species, Ribes vulgare (rubrum). Red Currants are mainly used for culinary purposes, the jelly being a general favorite. One or two varieties are mild enough to eat out of hand, but as a dessert fruit its ornamental properties are the main attraction.

Pruning.

Red Currants carry the bulk of their fruit on spurs, which form on the second-year and older wood. In many places where they are cultivated extensively it is general to prune them on a short-spurring system.

SUBSCRIPTION ORDER FORM

To the Manager,
The "Fruit World"—

Sir—Enclosed please find remittance for a year's subscription to the "Fruit World & Market Grower," commencing with the next issue.

Signed .....

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Printed and Published by the Horticultural Press Pty. Ltd., 78a Victoria Street, Melbourne. Phones: F 2656, F 2657; and at 439 Kent Street, Sydney.

Young plants, when set out in their permanent positions, are cut back to the base of the growth made in the cutting-bed, and eight well-placed shoots encouraged to form the initial framework. Subsequent winter treatments will, of course, be governed by the growth response of the bush, but, generally speaking, leads will be cut back to a half, and laterals spurred or removed entirely if misplaced. Any harder cutting is likely to cause a cluster of superfluous growths next season, useless for either fruiting or framework.

Summer pruning is practically essential if Red Currant culture is to be carried out successfully, and attention should be given to the leads before 12 inches or 15 inches of growth is exceeded. These shoots are then pinched back at the tips, and all crowded or unnecessary growths elsewhere broken out at the base; the whole operation takes only a few minutes to perform.

Manuring.

Yields are considerably lower than those of Black Currants, but, nevertheless, something over 2 tons per acre should be aimed at.

Owing to the quantity of brittle growth produced before the bushes come into bearing, on average soils, manuring should be withheld until the bush is built, and then only practised with discretion. This does not mean that manure is unnecessary, or that the bushes should be starved under all conditions, but a light mulch of farmyard manure, supplemented with average applications of superphosphate and potash, should give the results desired.

Varieties.

It was not until the beginning of last century that much interest was taken in raising new Red Currant varieties; now, however, a good selection is available. The one most commonly grown in this State is a strain of Red Dutch; this produces heavily, but the flavor of the berries and length of trusses leave something to be desired.

Red Dutch is a very popular European variety, and a heavy cropper. The fruit makes a fine preserve, and comes in about mid-season.

Raby Castle: This is another heavy producer, comes in before the Red Dutch, and makes a more vigorous bush, the ripe fruit holding on the bush exceptionally well.

Fay's prolific is probably the outstanding dessert variety; the berries are milder than other varieties, larger, and are produced in long racemes, which display the fruits to the best advantage. It matures much earlier than either of the previous varieties mentioned.—By Mr. T. D. Raphael, M.A., in Tasmanian "Journal of Agriculture."

PUBLICATIONS RECEIVED.

Citrus Diseases and Their Control:

A copy is to hand of a comprehensive, well illustrated book on "Citrus Diseases and Their Control," by Howard S. Fawcett. This book is in four parts, Part I.—General Considerations; Part 2—Root and Trunk Diseases; Part 3—Diseases of Branches, Twigs and Leaves; Part 4—Fruit Diseases. This book contains 656 pages, and is illustrated profusely, many of the illustrations being in natural colors. The publishers are the McGraw-Hill Book Company, 330 West 42nd street, New York, N.Y., U.S.A. The price is six dollars.

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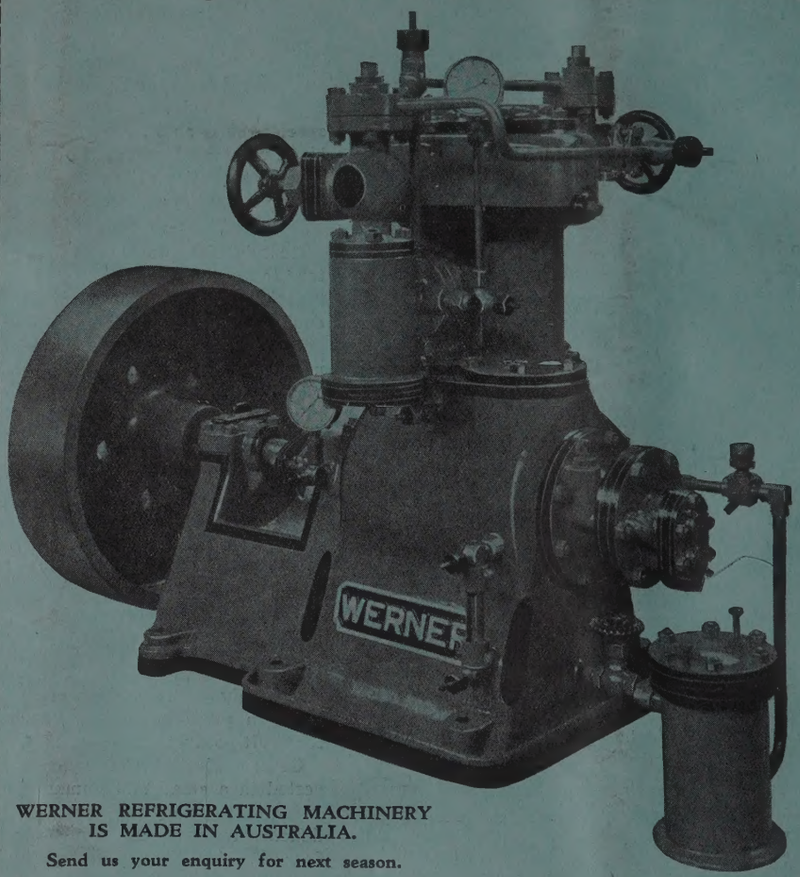

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Nutrition for Apple Trees

Injection Methods are Being Tested.

These are Quicker than by Root Action.

EXPERIMENTS ARE BEING conducted in Australia as also in other parts of the world in the matter of supplying nutrients to trees by way of injection instead of through the soil and root action.

It is interesting in this connection to note that this method is being experimented with at East Malling — where so much valued research work with fruit trees has been attended to.

This new method is being tried where there is a plant food deficiency as say with potash. The new method of injection is much quicker than with root action.

The nutrient is dissolved in enough water to make a solution of about one-quarter per cent, strength—1 lb. to 40 gallons. The solution is held in any convenient container which is supported at a level higher than that of the point where the injection is to be made. A hole of one-quarter inch diameter is bored through the stem of the tree and a narrow glass tube is inserted at one end with a collar of sponge rubber fittings close against the bark. The other end of the hole is blocked with a sponge rubber stopper. The glass tube is connected to the container by means of a siphon, and, as soon as the pressure of the liquid has expelled the air from the hole, the apparatus is bound up to prevent leakage.

The experiments have shown that, in Summer, the tree gets a suitable amount of nourishment in a period of one to three days, leaf scorch set-in if the treatment is continued too long. One set of apparatus may thus be used to treat, in succession, a considerable number of trees.

A group of Cox's Orange Pippin trees, twenty-one years old, received treatment, the operation being carried out at East Malling in June. The solution contained one-quarter per cent. of phosphate of potash and one-quarter per cent. of urea, a substance containing nearly twice as much nitrogen as sulphate of ammonia and being also more easily utilised by the plant. Varying quantities of the solution were used, containing up to one-sixth lb. of each nutrient per tree, equivalent to about 50 lb. per acre.

BROADCASTING.

Under the auspices of the Victorian Department of Agriculture an appreciated wireless talk was given by Mr. E. E. Pescott, Senior Horticultural Instructor, on the subject of Reworking Fruit Trees.

Further broadcast talks will be delivered as follows from Station 3AR from 6.48 to 7 p.m.:—

August 7, "Spring Factors Affecting Orchard Productivity," F. M. Read, M.Agr.Sc., Chief Inspector of Horticulture.

September 4, "Codlin Moth and Black Spot in Apples and Pears," E. E. Pescott, Senior Horticultural Instructor.